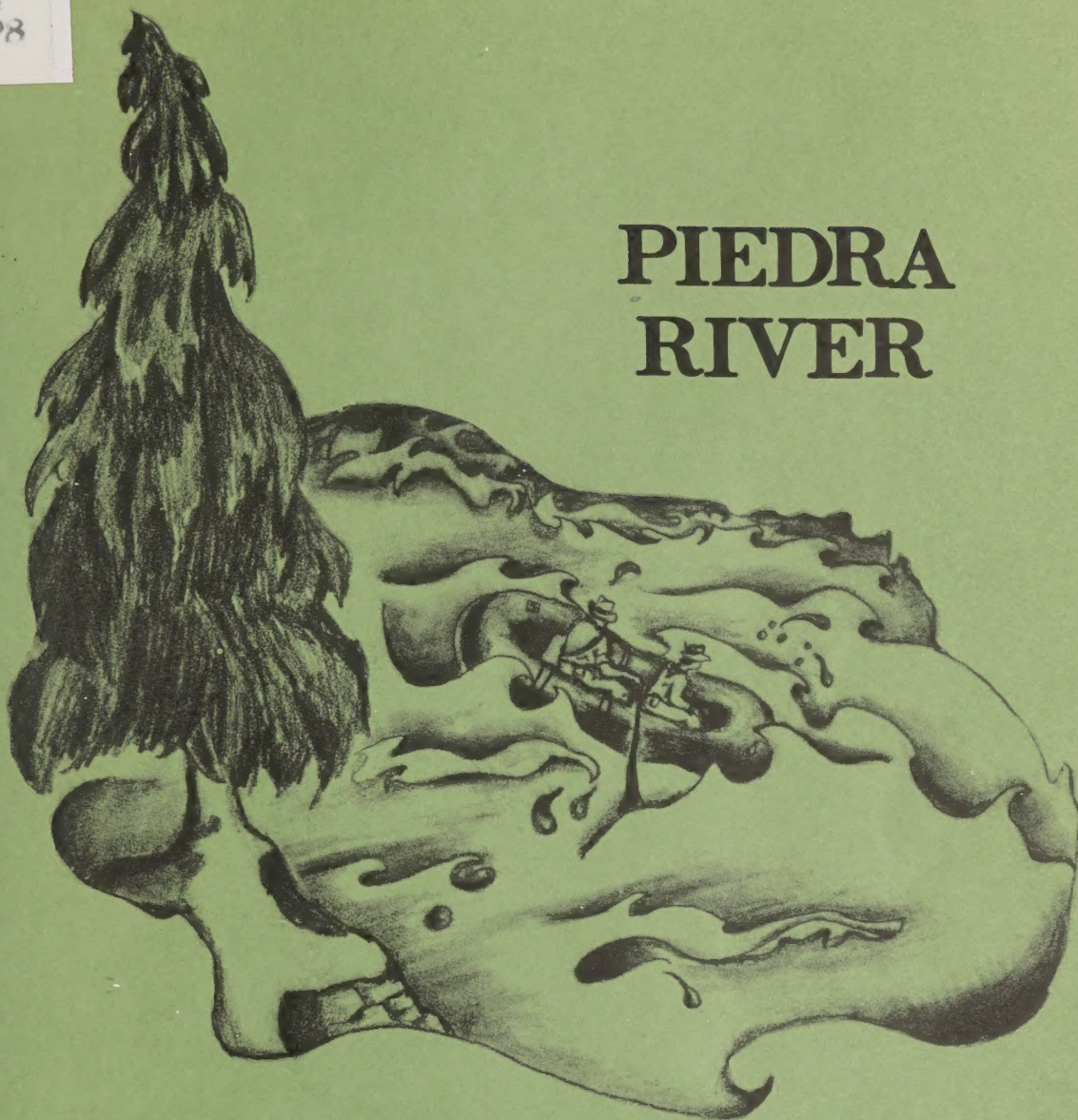


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PIEDRA RIVER

FINAL ENVIRONMENTAL IMPACT STATEMENT & WILD & SCENIC RIVER STUDY

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
ROCKY MOUNTAIN REGION



COLORADO DEPARTMENT
OF NATURAL RESOURCES

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FINAL ENVIRONMENTAL IMPACT STATEMENT
02-13-79-01

Designation of Portions of the Piedra River
and Its East and Middle Forks Under
The Wild and Scenic Rivers Act,
P.L. 93-621
Archuleta, Hinsdale, and Mineral Counties, Colorado

Lead Agency: USDA - Forest Service

Cooperating Agencies: Colorado, Department of Natural Resources
Colorado Water Conservation Board

Responsible Official: R. Max Peterson
Chief, Forest Service
South Building
12th and Independence Avenue, S.W.
Washington, D. C. 20250

For Further Information Contact: Walter D. Werner
San Juan National Forest
701 Camino Del Rio
Durango, Colorado 81301
(303)-247-4874

Abstract:

This Draft Environmental Statement describes three alternatives regarding the addition of the Piedra River in southwestern Colorado to the National Wild and Scenic Rivers System. The statement discusses the river's eligibility for being included in the National System and the estimated effects of implementing each of the alternatives. Alternative I has been identified as the Forest Service and the State's selected alternative. The rationale for selecting this recommended action is shown.

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Designation of Portions of the Piedra River
and Its East and Middle Forks Under
The Wild and Scenic Rivers Act
P.L. 93-621

Legislative Action

Responsible Agency: U.S.D.A. Forest Service

Responsible Official: R. Max Peterson
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Washington, D. C. 20250

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Durango, Colorado 81301
(303)-247-4874

Date of Transmission To EPA and the Public:

Summary

- I. The recommended action is to amend the Wild and Scenic Rivers Act (P.L. 90-542, as amended) to include segments of the Piedra River and its East and Middle Forks, of Hinsdale, Mineral, and Archuleta County, Colorado, in the National Wild and Scenic Rivers System. A 32.5 mile portion of the Piedra River system is proposed for inclusion in the National System as a wild river, 12.9 miles as a scenic river, and 5.5 miles to be added as a recreational river component.

Major issues that surfaced during the river study and environmental assessment were the effects of designation to the private landowners along the river, the lumber and livestock sectors of the local economy and protecting the river's environment from overuse by recreationists.

The study and assessment concludes that the effect to the local economy will be minimal with a portion of the reduction in the lumber sector, in terms of dollars and jobs, being offset by increases in the recreation and tourism sector of the economy. The livestock sector of the economy appears to be unaffected.

Resolution of the issues concerning private land uses and preventing overuse of the River's environment are a function of proposed management. The law provides for scenic easements covering the private lands that would control future new uses of the land but would not affect regular uses exercised prior to acquisition of the easement, without the owner's consent.

- II. Alternatives considered were formulated through application of Principles and Standards for Planning of Water and Related Land Resources. Three Alternative Plans are considered:

ALTERNATIVE PLAN I - Designation of all eligible segments of the river with classification level being at the most restrictive level for which each segment is suitable.

ALTERNATIVE PLAN II - Designation of all eligible segments of the river at a classification level of recreational.

ALTERNATIVE PLAN III - The River would not be designated as an addition to the National Wild and Scenic Rivers System.

The U. S. Forest Service and the Colorado Department of Natural Resources jointly agree that Plan I is the selected alternative.

- III. Environmental impacts associated with the recommended action include protection of natural or near natural river values of 50.9 miles of river through designation; this protection will be extended to 16,300 acres of the river's environment. Irretrievable effects include the non-availability of one proposed irrigation and hydro-electric reservoir system, reduce the available timber harvest by 400,000 board feet per year. Other effects include attracting increasing numbers of recreationists to the river. In addition, the administrative agency involved would acquire scenic and conservation easements over 1,653 acres of private lands within the visual corridor, in order to prevent land use conversion to residential purpose, and protect and upgrade a relatively natural environment along the river.

IV. List of Federal, State, and local agencies and other sources from which written comments have been received.

Federal Agencies

Department of Agriculture (Soil Conservation Service)
Department of the Army
Department of Commerce
Department of Housing and Urban Development
Department of Transportation
Environmental Protection Agency
Federal Energy Regulatory Commission

State Agencies - State of Colorado

Honorable Richard D. Lamm - Governor
Colorado Historical Society
Department of Health
Department of Highways
Department of Local Affairs
Department of Natural Resources
 Division of Parks and Outdoor Recreation
 Division of Water Resources
 Division of Wildlife
Office of Energy Conservation

Local Agencies

Upper San Juan Regional Planning Commission

Businesses and Organizations

Colorado White Water Association
Fremont Ecology
Front Range Fly Fishers
Indian Peaks Group of the Sierra Club
United Sportsman's Council of Colorado
University of Colorado Wilderness Study Group
Sierra Club Rocky Mountain Chapter
The Colorado Mountain Club
Wildlife Management Institute

Individuals

Armitage, Alexandra	Colo.	Merritt, Clifton R.	Colo.
Beecherl, Louis A.	Tex.	Mounsey, William Bird	Colo.
Bevans, Dave	Colo.	Numark, Neil J.	Colo.
Coules, Dennis	Calif.	O'Brien, Jamie S.	Colo.
Feazel, Elizabeth T.	Colo.	Orkow, Bonnie M.	Colo.
Grace, Lynn	Colo.	Ruth, Bobbie L.	Colo.
Gumaer, Dorthy	Colo.	Rodda, Gordon	Fla.
Hammond, John L.	Ore.	Spencer, Donald R.	Colo.
Hershey, Mrs. J. W.	Colo.	Steele, Virginia E.	Colo.
Hill, John H.	Tex.	Thompson, Ron	Colo.
Horning, Thomas	Colo.	Van Gytenbeek, R. P.	Colo.
Likens, D. L.	Fla.	Vander Zandeu, Karla	Colo.
Marks, Pamela	Colo.	Willard, Robert W.	Colo.
McKown, Ruth S.	Colo.	Zachary, Steve	Colo.

TABLE OF CONTENTS

	<u>Page</u>
Cover Sheet	i
Summary	ii
Table of Contents	iii

PART ONE

	<u>Page</u>	<u>Tables and Maps</u>	<u>Page</u>
I. Introduction	1-2	Map #1	1-3
B. Location.	1-2	Map #2	1-7
C. Scope	1-2	Table I.	1-8
D. Issues.	1-2	Table II.	1-9
E. River Study Process	1-4	Table III.	1-10
F. Other Governmental Relationships	1-4	Table IV	1-11
		Table V.	1-11
II. Affected Environment	1-6	Table VIa.	1-12
A. Regional Setting.	1-6	Table VIb.	1-12
B. Physical Environment.	1-6	Table VII.	1-13
C. Biological Environment.	1-6	Table VIII	1-19
D. Social and Economic Overview.	1-8	Map #3	1-23
E. Resources	1-9	Table IX	1-26
F. Private Lands	1-13	Table X.	1-28
		Table XI	1-29
III. Evaluation Criteria.	1-15	Table XII.	1-30
A. Eligibility	1-15	Table XIII	1-32
		Table XIV.	1-35
IV. Alternatives Considered.	1-18		
A. Alternative Formulation	1-18		
B. Alternatives Considered	1-21		
V. Effects of Implementation.	1-25		
A. Assumptions	1-25		
B. Outputs	1-26		
C. Values.	1-27		
D. NED Account	1-27		
E. EQ Account.	1-27		
F. Regional Development Account (RD).	1-27		
G. Social Well Being Account	1-31		
H. Irreversible and Irretrievable Effects	1-31		
I. Effects Summary	1-31		
VI. Alternative Evaluation	1-34		
VII. Selection of Preferred Alternative.	1-37		
A. Conclusions	1-37		
B. Classification Recommendations	1-38		
VIII. Consultation With Others	1-40		
A. Public Involvement Activities.	1-40		
B. Public Response	1-41		
C. Distribution of DEIS.	1-44		
D. Respondents to DEIS	1-44		
E. Copies of Letters Received in Response to DEIS and Forest Service Comments	1-45		

PART TWO

I. Introduction	2-2	Map #1	2-3
A. Background.	2-2	Table I.	2-6
B. The Study Setting	2-2	Table II	2-6
C. Regional Description.	2-2	Map #II.	2-12
D. History of Development.	2-4	Map #III	2-13

TABLE OF CONTENTS

PART TWO (continued)

	<u>Page</u>	<u>Tables and Maps</u>	<u>Page</u>
E. Current Social and Economic Overview	2-5	Map #IV.	2-15
F. Transportation.	2-6	Map #V.	2-16
		Map #VI.	2-17
II. The River Corridor	2-11	Table III.	2-23
A. Upper East Fork--Source To Weminuche Wilderness Boundary (Map #II). . . .	2-11	Map #VII.	2-23
		Map #VIII.	2-28
B. Upper Middle Fork--Source To Weminuche Wilderness Boundary (Map #III). . . .	2-11	Table IV.	2-29
		Map #IX.	2-35
C. Middle Segment--Weminuche Wilderness Boundary On Both Forks To The Confluence (Map #IV). . . .	2-14		
D. Mainstem--Confluence Of The Forks To Highway 160 (Maps V and VI)	2-14		
E. Resources and Uses Along The River Corridor.	2-18		
F. Private Lands of the Corridor.	2-19		
III. River Eligibilities.	2-21		
A. Methodology	2-21		
B. River Eligibility	2-21		
C. Segments Not Eligible	2-25		
IV. River Classification Suitability.	2-27		
V. River Plan Alternatives.	2-35		
A. River Designation Plan I. . .	2-35		
B. River Designation Plan II. . .	2-35		
C. No Designation Plan III. . . .	2-36		
VI. Conclusions and Recommendations.	2-38		
A. Conclusions	2-38		
B. Classification Recommendations	2-38		
C. Management Recommendations	2-38		
D. Management Concerns For Private Lands	2-45		

APPENDIX

A. Supplemental Guidelines For Tributary and Headwaters In The Piedra Wild and Scenic River Study.	A-1	Table B-II-1	B-7
		Table C-1.	C-2
B-1. Soil Types of the Piedra River Corridor	B-1	Table C-1 and II	C-3
		Table C-III and IV	C-4
B-II. Ecological Land Units of the Piedra River Corridor.	B-3	Table C-V.	C-5
		Table C-VI.	C-6
C. Water Data - Piedra River. . . .	C-1	Table D-I.	D-2
D. Transportation Route Descriptions	D-1		

NOTE TO READER

This document is written in two parts. Both parts are considered as an integral part of this Draft Environmental Statement. Cross references between the parts are made periodically for those who may wish to review certain items in more detail.

Part one documents the decision process that leads to the study reports recommendations.

Part two describes the Piedra River and its immediate environment in relation to the National Wild and Scenic Rivers System.

INTRODUCTION

I



1



2



3

- 1) High country of the East Fork Piedra.
- 2) Grebe in stream side eddy.
- 3) Rafter's passing First Fork bridge in low water.

I. INTRODUCTION

A. PROPOSED ACTION

To recommend to the United States Congress that the Piedra River be added to the National Wild and Scenic River System. The Wild and Scenic Rivers Act, as amended by Public Law 93-621, January, 1975 (hereinafter referred to as the Act), designated the Piedra as a study river along with twelve other rivers located in Colorado. The law specified: "(47) Piedra, Colorado: The Middle Fork and East Fork from their sources to their confluence, thence the Piedra to its junction with Colorado Highway 160, including the tributaries and headwaters on National Forest Lands." The study was later amended by Title VII of the Wild and Scenic Rivers Act of 1976 (Public Law 94-486, January, 1976). This amendment eliminated the tributaries and headwaters on National Forest Lands.

The Wild and Scenic River study, directed by the United States Congress, determines the river's eligibility; the social, economic and resource implication of the proposed action; and the resultant costs and proposed management of the river.

Under the authority of Section 5(c) of the Act, the State of Colorado requested that the study be jointly carried out by the Federal Government and the State. In February, 1976, a Federal/State study team (hereinafter referred to as the study team) was formed.

B. LOCATION

The Piedra River is located in southwest Colorado, west and south of the Continental Divide (see Map #1). Generally, the Divide runs north and south through Colorado, but in this area it bends to the west in a sweeping arc before continuing north. Study segments of the river are located on public and private lands in Archuleta, Hinsdale and Mineral Counties within the San Juan National Forest.

C. SCOPE

The study covered 53 miles of the river and its immediate environment within the river corridor. There are nearly 16,300 acres within the study corridor. Approximately 18 miles and 5,700 acres of the Middle and East Forks are within the Weminuche Wilderness. There are 2,600 acres of private lands that would be affected by river classification. Eighty-four percent of the study river corridor is on public lands and sixteen percent crosses private lands.

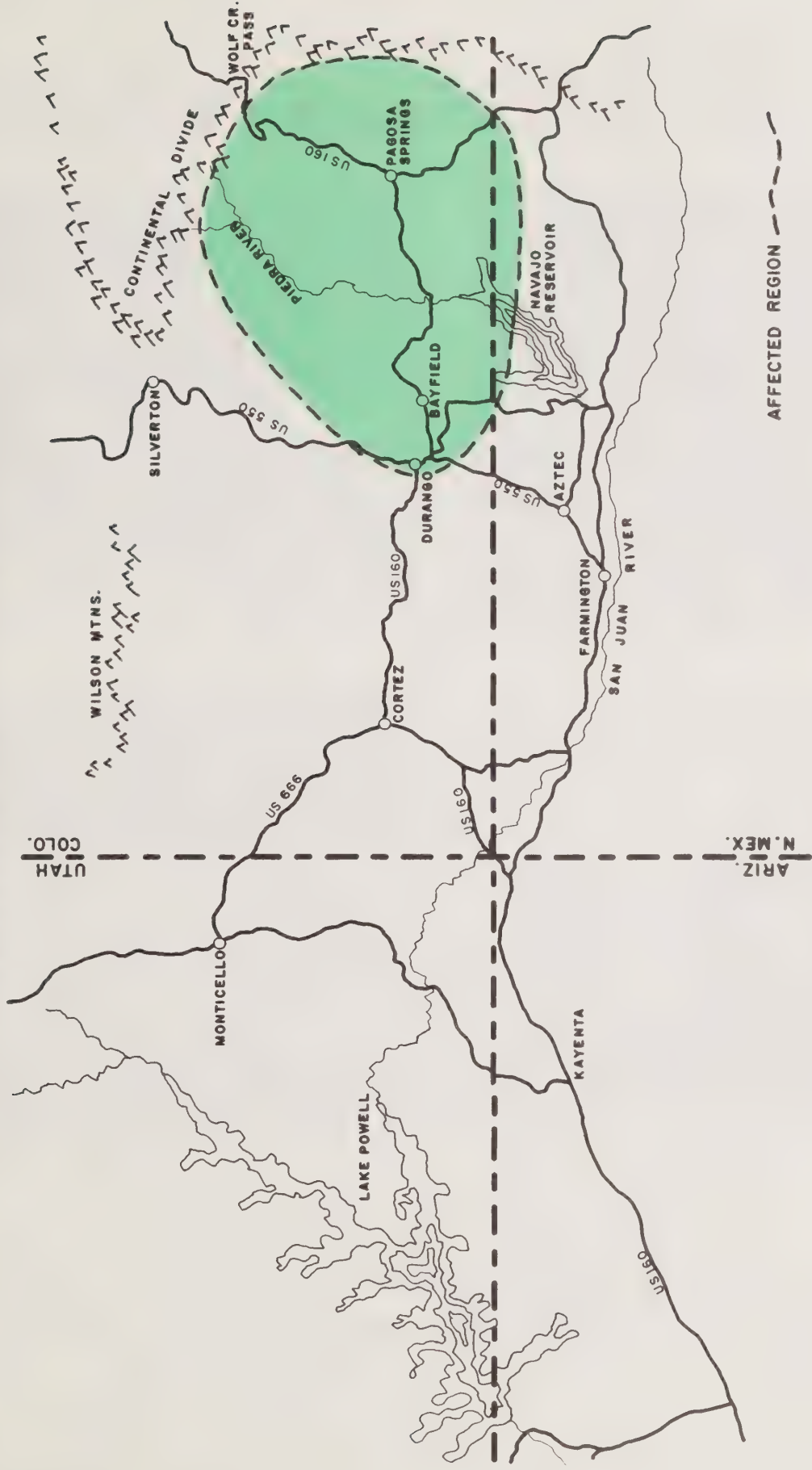
D. ISSUES

An intrinsic part of this study and planning effort was to obtain public comments concerning the study. The initial thrust of public involvement in the planning process was to identify issues and concerns. Following are the major issues regarding river designation as expressed by the public.

- 1) The Federal Government should not force private landowners to open their lands to public use (through easements) since the river runs mainly through public lands and the public currently has access to most of its length.
- 2) The Federal Government should not use river classification as a means to control water uses as provided for under State water laws.
- 3) Notoriety surrounding river classification will attract and encourage recreation use levels that will degrade the existing river environment.
- 4) Addition to the National Wild and Scenic Rivers System is the only means of guaranteeing protection of the physical, biotic and ecological environment of the river and its free-flowing character.
- 5) Lumber and livestock uses must continue to insure local economic stability.
- 6) Wildlife habitat should be managed or enhanced to support larger wildlife populations.
- 7) Management activities should not alter the natural beauty of the Piedra River.
- 8) Known historic and cultural resources should be protected.
- 9) Recreation use controls are needed to prevent overuse and degradation of the river environment.

MAP #I

REGION AFFECTED



FOUR CORNERS AREA

E. RIVER STUDY PROCESS

The first tasks were to decide how the study was to be conducted and to develop criteria for eligibility judgements on the small streams and tributaries (see Appendix A). At the beginning, all flowing water in the Piedra drainage above Colorado Highway #160 was the purview of the study.

Once the criteria and methodology were established the study proceeded in four basic steps.

1) Study Data

The study team used existing data bases to full advantage. In addition, a large resource data base was developed for the Piedra drainage. Data for the river corridor was extracted.

Field studies of the Piedra River and its tributaries began immediately after the public information program. Segments of nearly all named tributaries, East and Middle Forks and the Piedra mainstream were examined via foot, horseback, raft, motor vehicle, and by aircraft. Notices of field trips were published and the public invited to attend. Sixty-eight persons found time from their jobs to go on the trips. Eleven persons went on two or more. They represented a full range of interest from private landowners on the river to members of various environmental organizations.

2) Suitability

Next, the Piedra River segments were evaluated to determine their suitability for inclusion in the National Wild and Scenic Rivers System. Direction for this phase is found in the Act and supplemented in "Guidelines for Evaluating Wild, Scenic, and Recreational Areas Proposed for Inclusion in the National Wild and Scenic Rivers System". The latter document was issued by the Secretaries of Agriculture and Interior, February, 1970.

A four step process for determining suitability was used:

- (1) The river was evaluated in terms of eligibility for inclusion in the national system;
- (2) the eligible portions were divided into classifiable units on the basis of length and character similarities;
- (3) the most restrictive classification level was identified;
- (4) all information from the public, including comments on criteria and eligibility findings, and comments obtained at the public meetings, was evaluated. This information was utilized by the study team to review its suitability findings and to check for errors and oversights.

3) Alternatives

The Water Resources Council's "Principles and Standards for Planning Water and Related Land Resources" was used to develop and analyze alternative plans. The adoption and requirements of "Principles and Standards" was published in the Federal Register, Vol. 38, No. 174, Part III, September 10, 1973.

4) The Study Recommendation

The preferred alternative and recommended action were selected by both the Forest Service and the Colorado Department of Natural Resources representing the State. Their decision is based upon the alternative plan that in their judgement met the evaluation criteria. Information and comment received from the public was also considered. Although public response to the river study was vigorous and primarily polarized between two philosophies, all substantive public comments were utilized in the alternative formulation and analysis process.

G. OTHER GOVERNMENTAL RELATIONSHIPS

To complement the Colorado Department of Natural Resources and their direct involvement in the study, the Department of Local Affairs, Division of Planning, insured that all State agencies had opportunity for review and comment.

Although specific county objectives were not available, contacts were made with the County Planner to keep the study abreast with county planning efforts.

AFFECTED ENVIRONMENT

II



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- 1) Old barn of unusual design located on private land in the river corridor.
- 2) Livestock bridge on the mainstem of the Piedra.
- 3) Old barn and shed on private land.
- 4) Piedra River near Chimney Rock.

II. AFFECTED ENVIRONMENT

This description sketches a general view of local, regional and statewide considerations. Chapters I and II of the Study Report present a detailed picture of the natural and human environments affected by the study.

A. REGIONAL SETTING

The Piedra River is the most northeasterly tributary of the San Juan River (see Map #2). The San Juan River, the second largest tributary to the Colorado River, is located in the "Four Corners" area of Colorado, Utah, Arizona and New Mexico. The Piedra Basin produces approximately 16 percent of the San Juan River flow. ^{1/} In the arid "Four Corners" area, water and the watersheds from which the streams originate are the geographic and economic lifeline.

The 371 square-miles drained by the Piedra River above Colorado Highway 160 are primarily public lands within the San Juan National Forest. Approximately 16 percent of the 401,000-acre Weminuche Wilderness is in the Piedra Valley.

B. PHYSICAL ENVIRONMENT

Exposed geology of the Piedra River basin and planning unit show geologic processes from the Precambrian period, forward in time to the Quarternary. The geologic history resulted in the land form and geologic values for which the river is being considered as a worthy addition to the National River system. ^{2/}

Diverse geology and the various climatic cycles occurring during the geologic time scale have resulted in many different soils. A detailed listing of soil types is found in Appendix B-1.

Although climate varies with elevation and exposure, short, cool summers and long winters are generally characteristic of the basin. The summer period (without frost) ranges from 48 to 100 days.

The Piedra River drains a productive watershed. Geologic Survey gage #3495 on the Piedra River near the Colorado Highway 160 bridge registered an annual average discharge of 223,900 acre-feet of water. ^{3/} Appendix C shows the discharge volumes for 1940-72.

C. BIOLOGICAL ENVIRONMENT

The varied soils, exposure and elevation effects on climate have resulted in 15 major vegetative types or associations. When combined with landform in the Piedra valley, 48 combinations exist as a basis for ecological land units (ELU's); the river corridor contains 16 of the 48 ELU's (see Appendix B-II). The majority of the ELU's in the river corridor are unsuitable for development. Those that are suitable are generally surrounded by others that are unsuitable, resulting in little or no past development along most of the river.

The area drained by the Piedra is well known for its big game mammal populations and associated sport hunting. The economically important species are the elk, mule deer, black bear and Bighorn sheep. The State Division of Wildlife has identified 43 other mammals, 17 species of reptiles and amphibians and 197 birds that may be found along the Piedra and its tributary valleys. The Peregrine falcon, a bird on the Federal Endangered Species list, uses a portion of the study area for hunting.

Fisheries in the Piedra river system are as diverse as any river system in southwestern Colorado. Currently, there are 20 known fish species inhabiting the basin waters, the largest percentage being warm water fish in the Navajo Reservoir, located below the river study area.

1/ Colorado Water Conservation Board and USDA, Water and Related Land Resources San Juan River Basin-Arizona, Colorado, New Mexico and Utah, 1974, Type Four, Cooperative Study, pp. I-1 - III-1.

2/ Larsen, Esper S. and Whitman Cross, Geology and Petrology of the San Juan Region Southwestern Colorado, 1956, USDI-Geological Survey, Professional Paper 258, pp. 1-11.

3/ USDI-Geological Survey, Water Resources Data For Colorado, Part I, Surface Water Records, 1973.

MAP#2 PIEDRA WILD AND SCENIC RIVER STUDY CORRIDOR



D. SOCIAL AND ECONOMIC OVERVIEW

Historic and Cultural: The river corridor is associated with the prehistoric Anazasi culture. Most early occupation by this culture occurred below the area being studied, but evidence of some transient occupation exists in the river corridor.

Historically, the Piedra drainage did not have the rapid development experienced in other parts of Colorado. The area lacked the base minerals that attracted populations of miners and associated support developments. Early Spanish explorers bypassed the Piedra Valley.

Present Communities and Economics: In the upper valley, Mineral and Hinsdale counties are separated from their county seats and other county towns by the Continental Divide. This isolation has caused all activities except county government to be centered in Pagosa Springs and Archuleta County. With few exceptions, social and economic data for the isolated portions of Mineral and Hinsdale Counties could not be developed. Since the trade and economic base of these scattered residences is tied directly with Pagosa Springs and Archuleta County, this plan considers the three counties as a single entity (hereinafter referred to as the County).

The County is rural, with an economic base provided by tourism, lumbering and agriculture. The desire to live in the appealing natural setting offered in the area is one of the main reasons for population increase. Tourism helps familiarize people with the region; to a lesser extent it also provides jobs when they come to locate. ^{4/}

In-migration is expected to continue in spite of a chronic unemployment rate varying from 8.8 percent to 11.1 percent annually. This is continually higher than desired and indicates a definite need to increase employment opportunity.

TABLE I
Monthly Unemployment Fluctuations for Archuleta
County for Sample Years 1975, 1976, 1977, 1978 & May 1979
(Percent rate of unemployment)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1975	17.9	23.9	20.0	20.3	13.6	9.6	9.1	7.3	5.8	7.5	8.0	10.1
1976	13.4	12.1	13.9	9.5	7.6	6.4	6.0	7.1	4.9	5.1	7.6	12.5
1977	11.4	21.0	20.7	16.7	11.3	11.4	10.4	9.8	9.2	12.8	14.5	18.5
1978	23.8	23.7	26.0	25.3	30.0	22.4	17.9	11.9	8.2	9.6	9.3	13.3
1979	17.9	18.0	16.0	18.4	14.8							

Source: Colorado Division of Employment

Timber and sawmill operations have been an economic mainstay in the county. In recent years, however, national market demands have been creating periodic fluctuations. Ranching also contributes to the economic base, while hay is the only field crop in the agriculture sector of the economy. Both hay production and cattle production are decreasing. ^{5/}

No studies have been made on the tourism and recreation components of the county's economic base, but indicators such as lodging, Forest Service recreation use and State records on hunter use show an upward trend.

Several needs and attitudes were expressed by the local public during both the information meeting and the alternative workshop. With a few dissenting opinions, the general local attitudes expressed were:

- Recreation and tourism growth are seen as desirable and inevitable; however, the growth should be controlled to prevent environmental degradation in the river drainage.
- The Forest Service (Federal government) should continue timber sales to aid the county road and school activities through the 25 percent fund.

^{4/} Hayes, Vicki L., A Social-Economic Profile of the San Juan Basin, 1974 USDI-Bureau of Land Management San Juan Area Office and Western Interstate Commission for Higher Education, pp. 6-23.

^{5/} Lucyk, Philip J., Economic Inventory Archuleta County Colorado, 1976, Upper San Juan Regional Planning Commission and Western Interstate Commission for Higher Education, pp. 12-19.

- County economic growth is regarded as desirable.
- Changes in the economic component balance are seen as inevitable but they should be gradual.

E. RESOURCES

The Piedra River corridor is only a small part of the entire valley. However, it is important to gain perspective of the entire resource base of the valley to better understand the role the river corridor assumes with respect to the economic and environmental considerations for the local area, region and state.

Outdoor Recreation: A wide variety of outdoor recreation opportunity is available in the Piedra Valley. Activities include camping at developed sites or backpacking, hiking, fishing, hunting, picnicking, horse riding, snowmobiling, off-road vehicle activities, and white water boating. The river corridor contributes to the bulk of the fishing, hiking, backpack camping and white water boating uses. The river corridor, while not being the primary area for hunting, is generally used as access routes and locations for the hunter camps.

Within the Piedra Valley there are ten developed campgrounds, one picnic ground and one boat launch site. The theoretic seasonal capacity for the developed sites is 212,000 visitor days. Current capacity is 1,055 persons at one time. Only four of the developed campgrounds and the picnic area are located in the river corridor. The capacity of these developments in the corridor is 230 persons at one time.

Visitor use on National Forest lands are estimated each year and reported in the Forest Service's Recreation Information Management System. Table II shows a summary of past reported use totals for all activities.

Historical use trends in the river corridor have shown a small but steady increase each year. It is expected that this trend will continue and perhaps be accelerated by increasing demand for white water recreation. The use could also increase at a higher rate each year on account of the greater exposure of the river to the public through Wild and Scenic Rivers designation.

TABLE II
SUMMARY OF REPORTED RECREATION USE
(Visitor Days)

Year	Total Forest Use	Total Piedra Valley Use	Percent of Forest Use	Estimated* River Corridor Use
1975	1,549,300	235,700	15.2	98,000
1976	1,556,800	242,700	15.8	98,400
1977	1,501,200	264,900	17.6	99,200
1978	1,832,400	326,200	17.8	101,300

*Corridor use is estimated because the RIM system does not carry the river corridor as a separate recreation element.

Wilderness: The upper Middle and East Forks are segments of the river corridor located in the Weminuche Wilderness. The river corridor affects 5,700 acres of the 397,489 acre Wilderness. The proposed Weminuche Wilderness Management Plan contains provisions which are more restrictive than management provided for under the inter-departmental management objectives for wild rivers.

The proposed Weminuche Plan directs that should a wild and scenic river designation attract increased users to the detriment of the wilderness resource and values, user levels will be controlled.

Reported use figures are not available for the river corridor within the Weminuche because the RIM system heretofore did not consider the corridor as a specific recreation element. By subtracting the uses and activities reported for the Weminuche that are known to be outside the corridor, the estimated use approximates 1,900, 2,000 and 2,900 visitor days respectively for 1975, 1976 and 1977.

The proposed Wilderness Management Plan, utilizing a system of recreation management units and carrying capacity would limit use of the river corridor in the future when it reaches approximately 5,000 visitor days for both the Middle and East Forks.

Wildlife: The Piedra Valley contains most species of wildlife found at comparable elevations throughout the State of Colorado. Principle non-game species include beaver, marten, mink, coyote, bobcat and a host of other small mammals, birds of prey, reptiles and song birds.

Game species include grouse, turkeys, water fowl, rabbits and the four economically important big game species: elk, mule deer, black bear and Bighorn sheep.

Approximately 3,400 elk inhabit the Piedra Valley. Elk occur in the largest numbers and provide the highest recreation potential (hunting related) of all big game species. Hunter harvest between 400 and 500 animals from this elk herd each year. The balance of the estimated 2,900 animals using the valley winter to the south in and around the Southern Ute Indian reservation; only about 500 winter within the river corridor.

Mule deer inhabit the same general area as the elk and have similar seasonal distribution. Current numbers are low but trends indicate an increasing population. The Colorado Wildlife Division's field people estimate that between 150 and 200 bears inhabit the area. Rocky Mountain bighorn sheep are found in the area above timberline in the Weminuche Wilderness. The current population of 75 to 100 seldom wander into the river corridor located in the valley bottoms.

The Piedra valley contains a variety of vegetative systems that provide a variety of habitat. Table III shows the major habitats identified. Riparian habitat is found all along the river within the corridor. Its area and location varies from a few feet between the water's edge and the steep dry banks in some locations to strips several hundred feet wide along side streams joining the river.

Riparian habitat is essential to the survival of ichthyofauna in the southwest where very limited lacustrine habitat exists. 6/ Other studies in the Colorado River Basin have shown that riparian ecosystems have higher avifauna densities per unit area than any other Forest habitat type. Recent studies indicate that the presence or absence of riparian habitats not only affects species directly associated with such vegetation but also influences wildlife diversity and productivity in adjacent habitat types.

The Colorado Division of Wildlife has the authority to control animal populations through harvest or hunter pressure. Actions taken under the State authorities are not affected by Wild and Scenic Rivers consideration.

Within the river corridor, expectations for future big game and non-game populations remain fairly constant with the existing situation.

The Piedra River is considered by the Colorado Division of Wildlife to be a high value fishery. Eight species of fish were taken in samples of the lower river during the study; however, the species diversity decreases as the headwaters are approached. Table IV displays the results of stream sampling accomplished by the State Division of Wildlife.

Fishing pressure will continue to increase on the Piedra River. The size and number of fish returned to the creel will continue to decrease, as it has in recent years. This will be a result of increased harvest of the older age classes as fishing pressure increases.

TABLE III
ACRES OF WILDLIFE HABITAT

Suitability	Non-Game Habitat		Big Game Winter Habitat		Big Game Summer Habitat	
	Piedra Valley	River* Corridor	Piedra Valley	River Corridor	Piedra Valley	River Corridor
High	86,600	16,300	30,400	1,700	101,700	10,400
Moderate	106,300	---	32,500	1,900	73,200	5,900
Low	11,900	---	25,700	4,500	29,900	---
Unsuitable	---	---	116,200	8,200	---	---

*The river corridor acres are also included in the Piedra Valley acres.

6/ Hubbard, J. P. 1977. Importance of Riparian Ecosystem: Biotic Considerations In Importance, Preservation, and Management of Riparian Habitat, A symposium, USDA - Forest Service, General Technical Report RM - 43:14-19.

TABLE IV
SUMMARY OF STREAM SAMPLES
MADE BY THE COLORADO DIVISION
OF WILDLIFE - PIEDRA RIVER STUDY

Sample Location	Species*	Estimated Pounds
	In Sample	Per Acre**
Middle Fork, East Toner Bridge	A,B,C,D	63
East Fork, Above Diversion Ditch	A,D,E	5
Piedra River, At Piedra Picnic Area	A,B,C,E	12
Piedra River, Above First Fork Bridge	A,B,C,G	17
Piedra River, At Lower Campground	A,B,F	4
Piedra River, Above Tres Piedras Ranch	A,B,C,D,G,H,I	97***
*A - Sculpin, B - Brown Trout, C - Rainbow Trout, D - Cutthroat Trout, E - Brook Trout, F - Dace, G - Suckers, H - Bullheads, I - Kokanee		
**Includes all species		
***Fifty-nine percent of Bio-mass resulted from suckers		

Range: There are four domestic sheep allotments and twelve cattle allotments in the Piedra Valley. Ten of these allotments contain segments of the river corridor. Twenty families depend partially on the forage of these National Forest lands for maintenance of their livestock. Table V displays the livestock grazing on National Forest lands within the Piedra Valley which also includes the limited amount of grazing within the river corridor.

Range conditions are presently considered to be generally good. Future trends in the amount of grazing will remain fairly static because the potential for increasing grazing capacity through vegetative manipulation and other range improvements is fairly limited.

TABLE V
GRAZING ALLOTMENTS

Name	Acres		Permitted Use	
	Gross	Useable Range	Numbers	AUM's**
Sheep Allotments				
Hossick Canyon	16,100	3,200	900	2,110
Middle Fork	19,000	4,000	700	1,750
Deadman	11,500	2,600	900	2,130
First Fork	17,400	4,900	Inactive	
Total	64,000	14,700	2,580	5,990
Cattle Allotments				
*Sheep Creek	6,200	1,000	180	620
*Dudley Creek	26,700	10,000	200	920
*Weminuche	3,100	1,900	80	360
Drift Fence	5,000	3,100	340	1,240
Williams Creek	3,000	1,300	90	380
Divide Park	4,000	3,600	290	1,290
Trail Creek	3,700	3,300	180	730
*Middle Fork	4,300	1,700	170	780
*East Fork	7,200	2,800	170	780
Pagosa Peak	15,100	10,100	1,330	5,100
*Freeman	12,300	6,300	120	570
Mosca	8,200	4,100	270	1,080
*Mesa-Horse Mtn.	24,900	21,300	240	1,060
Total	123,700	70,500	3,660	14,910

*Contain segments of the River Corridor

**Animal Unit Month - One animal grazing for one month.

Timber: The forested areas of the Piedra Valley and adjacent valleys have been the mainstay of the areas important economic sector; lumber and wood products. Three sawmills (two in Pagosa Springs and one in Chama) rely on timber from the basin. Over the past ten years these mills have utilized an average 32.9 million board feet per year. The source of the timber for these mills in the past has been National Forest lands from Bayfield eastward to the Forest boundary on the Continental Divide.

The valley contains 176,700 acres of timbered lands; the remaining 28,135 acres are non-forested or water surface. The wild and scenic river corridor affects 10,500 acres of non-wilderness land. Of these, approximately 2,700 acres are privately owned and not included in the timber base. Tables VIa and VIb show the forested areas by species and size class.

Timber harvest in the past has only occurred on river corridor lands along the East and Middle Forks and a small area near Sheep Creek on the lower river. Difficult terrain, high road development costs and other environmental considerations have left the river corridor largely untouched by timber harvest. This trend will continue unless techniques and costs of helicopter logging systems improve to avoid conventional logging developments.

TABLE VIa
TREE SPECIES OF THE PIEDRA VALLEY - 1977

Species	Acres - Size Class			
	Sawtimber	Poletimber	Seedling/Saplings	Non-stocked
Spruce Fir	60,600	1,600	600	2,800
Ponderosa Pine	30,400	5,600	1,400	--
Douglas-fir/White Fir	35,500	4,400	300	--
Aspen	7,300	24,400	1,800	--

TABLE VIb
TREE SPECIES OF THE RIVER CORRIDOR

Species	Acres - Size Class			
	Sawtimber	Poletimber	Seedling/Saplings	Non-stocked
Spruce Fir	800	--	--	--
Ponderosa Pine	2,900	1,800	--	--
Douglas-fir/White Fir	1,900	300	--	--
Aspen	300	1,100	--	--
Non-Forest & Water	--	--	--	1,600

Water: An average 223,900 acre feet of water per year is discharged from the river. It is used for recreation, irrigation, domestic, and fish and wildlife uses. The average annual water yield could be increased if all timber stands were managed for water production (see Appendix C).

Minerals: Small shipments of metalliferous ores from the Pagosa Springs area have occasionally been reported to the Colorado Bureau of Mines, but no source has been definitely identified within the study area. 7/ In recent years, exploratory activities for nuclear minerals have increased. Uranium in Dudley Creek, a tributary on the lower Piedra, was noted in the 1950's and is the focal point of recent activity with several hundred mining claims being established. No economic finds have been reported to date.

Pursuant to Sections 9(b) and (a-iii) of the Wild and Scenic Rivers Act, those areas within one-quarter mile on either side of any river added to the system withdrawn from all forms of appropriations under the general mining or leasing laws.

Energy: The area does not have any identified potential for geothermal energy; natural gas potential is limited. Minor amounts of combustible gas were encountered in the Lewis Shales, northerly from Pagosa Springs, during water well drilling but no economic development occurred.

The area does not contain any known coal leasing areas. 8/ Lignite occurs southeast of the study area. The coal-bearing formation extends into the southeastern portion of the drainage but has little potential in the river corridor.

One potential hydroelectric site exists in the First Box Canyon of the Piedra River with the capacity for generating 40,000,000 kilowatt-hours annually. 9/ Costs determined at the time of the U.S.D.I. report indicated a benefit/cost ratio of 0.8612. No further action was taken between the reconnaissance report and the present to establish the project.

7/ Four Corners Environmental Research Institute, Geologic and Mineral Evaluation of the Pagosa and Piedra Planning Units, 1977, San Juan National Forest, p. 5.

8/ Energy Minerals Activity Recommendation System, Map of Known Coal Leasing Areas, 1976, Colorado State Office of the Bureau of Land Management.

9/ USDI-Bureau of Reclamation, O'Neal Park Project-Colorado, 1956, Reconnaissance Report, p. 2.

Scenery and Visual: The natural scenery of approximately one-third of the land area within the Piedra Valley has been modified by man's activities. Thirty-six percent is natural scenery without signs of man's impact, except for trails. The visual character is slightly or partially modified in remaining areas. Under the present Forest Service visual management system, the objective is to retain the existing scenery in the river corridor.

Transportation: Although transportation system is not a resource, it supports accomplishment of resource uses and objectives. The major state highway route into the river basin area is Colorado Highway 160. Access from Highway 160 into the river is served primarily by Forest Development Roads 631 (upper valley) and 622 (lower valley). Roads to the East and Middle Forks are FDR 633, 636 and 637, which connect with FDR 631. Presently, there are nearly 220 miles of roads serving the drainage. These roads are of various standards and provide access for resource use.

There are approximately 170 miles of trails throughout the valley. Within the Weminuche Wilderness there are 20 miles of trails serving the study area (see Appendix F).

F. PRIVATE LANDS

There are approximately 16,600 acres of private lands in the Piedra Valley within the boundaries of the San Juan National Forest. In the past most private lands were predominantly used for livestock grazing.

Demand for housing and domestic water use has made it increasingly profitable for ranchers to sell their property for other uses. Although the conversion of ranch lands to other uses is not considered to be desirable, as adverse market conditions, increased operating costs and social constraints continue to impact the agriculture industry, many ranchers are financially encouraged to sell their lands for subdivisions.

Of the 16,600 acres of private land within the valley, the river corridor only affects 2,700 acres. In recent years 940 acres have been converted from agriculture to other uses. Table VII summarizes these uses of private lands within the river corridor.

In view of the changing economic and social patterns in the affected counties, it can be expected that an increasing number of private land acres in the river corridor will be converted from open space and agriculture to subdivision uses.

TABLE VII
SUMMARY OF PRIVATE LAND USES

<u>Use</u>	<u>Number of Tracts</u>	<u>Approximate Acreage</u>
Home Sites	9	250
Resort	1	340
Retreat	1	350
Agriculture	9	1,760

EVALUATION CRITERIA

III



- 1) Valley at head of the Middle Fork.
- 2) Shallow cave in limestone outcrop below First Box Canyon.

III. EVALUATION CRITERIA

A. ELIGIBILITY

Section 2(b) of the Wild and Scenic Rivers Act establishes the criteria for determining whether a river is eligible for inclusion in the National System. Section 2(b) states:

"(b) a wild, scenic or recreation river area eligible to be included in the system is a free flowing stream and the related adjacent land area that possesses one or more of the values referred to in Section 1, subsection (b) of this Act."

Values referred to in Section 1, subsection (b) are "outstandingly remarkable scenic, recreational, geologic, historic, cultural, fish and wildlife, or other similar values".

The "Guidelines for Evaluating Wild, Scenic and Recreational River Areas Proposed for Inclusion in the National Wild and Scenic Rivers System Under Section 2, PL-90-542" published by the United States Department of Interior and Agriculture, provide additional clarification concerning eligibility. These guidelines require the river to meet standards of volume, length and water quality.

The study team developed a set of supplemental guidelines for use when determining eligibility of the small tributary streams and headwater areas. These criteria were given public review prior to being used in the field (see Appendix A).

B. ALTERNATIVE PLANS

The study team and agency managers identified the following criteria to be used to evaluate the alternative choices for management.

- 1) Overall Congressional policy and intent for establishing the Wild and Scenic River System to manage and protect certain rivers in their free flowing character for the enjoyment and use of present and future generations.
- 2) Goal Satisfaction: The Forest Service and State of Colorado have various goals for planning land and resource uses. Forest Service goals of the 1975 Resources Planning Act program and the Rocky Mountain Regional plan include the following goals adapted to the Piedra River:
 - Maintain current cost/effective developed sites that implement managed recreation use in the Piedra River corridor.
 - Increase emphasis on dispersed recreation activities and achieve a balance between motorized and non-motorized dispersed activities within the Piedra River corridor.
 - Provide for stable populations of big game species by protecting key winter habitat and migration routes in the lower valley.
 - Continue to aid the agriculture economy of Archuleta County by providing forage for livestock to the extent that costs are commensurate with benefits.
 - Maintain the current level of timber production by providing timber supplies to the local dependent wood-using industries.

In 1976, the Governor of Colorado issued an executive order setting the goals and objective's for Colorado's long range growth and development. An abstract of these goals relevant to the river include:

- Preserve and enhance the agriculture component of the State's economy and prevent unnecessary conversion of prime agricultural land and water suitable for irrigation to non-renewable uses.
- Make specific efforts to protect, preserve, enhance and manage Colorado's wildlife for public benefit and enjoyment.
- Preserve the natural beauty of the State while still providing jobs.

Archuleta County and the area covered by the Upper San Juan Regional Planning Commission are in the process of establishing planning goals for the local area. Although the County Commissioners, acting through their planner, are participating in current public involvement programs, no specific goals have been identified.

Current planning efforts of Archuleta County and the Upper San Juan Regional Planning Commission did not provide any specific goals regarding the Piedra River.

3) All alternative plans must be physically and environmentally suitable, within financial capabilities and legal authority, and have technical capabilities.

ALTERNATIVES CONSIDERED

IV



1



2



3

- 1) Gravel pits located on private lands along the East Fork.
- 2) Government trail through private lands in the wild segment.
- 3) Cliffs near Piedra Falls.

IV. ALTERNATIVES CONSIDERED

The Water Resources Council (WRC) adopted an analytical process for developing and evaluating alternative plans for water and related land resource uses in 1973. This process was published in the Federal Register, Volume 38, Number 174, September 10, 1973. These Principles and Standards were used in the assessment and study of the Piedra River.

According to the Principles and Standards, planning for the use and development of the Nation's resources serves two major, co-equal objectives: National Economic Development (NED) and Environmental Quality (EQ). Both objectives are equally important and are treated accordingly in the analysis. Each alternative is measured in terms of satisfaction of the objective for which it was formulated and its effects on the other objective. Additionally, the beneficial and adverse effects of each alternative are compared in a system of accounts which include national economic development, environmental quality, regional development (RD) and social well being (SWB). (The first two accounts should not be confused with the NED and EQ objectives.)

When outright conflicts exist that preclude satisfaction of the alternatives, a number of alternatives are developed to assure that all reasonable alternatives are considered.

A. ALTERNATIVE FORMULATION

As the first step a Supply/Demand analysis was made to establish the framework for the alternatives. The analysis here is made for the entire Piedra drainage because the river corridor provides only a small fraction of the local economic base. Table VIII displays the demand analysis for resources of the Piedra drainage.

- 1) Demand projections for outdoor recreation use are based on average annual increase (1966-1976) for the various reported uses; supply is based on the ecological suitability for individual ELU's (see Appendix B-11) for individual uses.
 - Hunting and fishing demand is extrapolated from projections in the Colorado Division of Wildlife's strategic plan for wildlife and fish management ("Today's Strategy...Tomorrow's Wildlife", 1978). Supply is based on statewide averages of use and hunter densities published in the annual D.O.W. hunting reports, 1970-1976.
 - Camping and picnicking supply is projected from capacity of existing developments plus capacity of potential developments and rehabilitation of existing sites.
 - Supply for trail and road use--including hiking, horseback riding and vehicular use--is computed on the basis of miles of trails and roads, including an estimate for off-trail and off-road uses.
 - White water boating supply is based on current and projected capacities of put-in and take-out locations and average river volumes that establish seasons of use.
 - Supply for other boating is associated with the surface area capacity of Williams Creek Reservoir since it is the only lake in the drainage that accommodates boating. The State Division of Wildlife has imposed a potential limit of 400 people/day for use of the reservoir.
- 2) Demand projections for wood fiber products is taken from OBERS Series E projections (1972). Supply from 1977 through 2000 is based on maintaining current production levels of the dependent industries.
- 3) Domestic livestock production demand in Animal Unit Months (AUM's) for National Forest lands is taken from OBERS Series E projections (1972). Actual numbers of AUM's utilized in 1976 provide the demand base for Forest Service lands; supply is the current carrying capacity of the allotments. The projections are based upon planned changes in the current allotment plans that would balance permitted use with carrying capacity.
- 4) Demand for domestic livestock production on private lands within the river corridor is taken from OBERS Series E projections. The assumption that the demand for irrigation water and crop land, non-irrigated crop land, range land and wood land is a derived demand induced by the demand for livestock. AUM's are determined from figures supplied by SCS and measured against FHA farm and ranch loan appraisal data. Supply is assumed to remain the same because improved irrigation systems delivering water more efficiently and increase per acre feed production are generally not available for the lands under irrigation.
- 5) Demand for minerals, although unquantified, is based on population growth, energy and minerals use, and economic growth developed by the U.S. Geological Survey, Bureau of Mines and the Energy Research and Development Administration. Generally, demand is assumed to equal supply. Presently, the supply is not known since prospecting has not resulted in mineral extraction operations.

TABLE VIII
RESOURCE SUPPLY/DEMAND ANALYSIS
Piedra Drainage

RESOURCE COMPONENTS	UNIT	DEMAND	1976 SUPPLY	NEED	DEMAND	1985 SUPPLY	NEED	DEMAND	2000 SUPPLY	NEED
Outdoor Recreation	MVD ^{1/}									
Camping	"	105.1	212.4	None	190.6	186.4	4.2	807.9	202.4	605.5
Big Game Hunting	"	11.0	29.8	None	29.1	29.8	None	100.9	29.8	71.1
Fishing	"	32.7	75.3	None	59.4	75.3	None	161.5	75.3	86.2
Hiking & Other Trail Uses	"	28.9	29.0	None	40.8	37.0	3.8	73.0	37.0	36.0
Driving for Pleasure	"	58.7	388.5	None	69.7	388.5	None	93.1	388.5	None
Whitewater Boating	"	1.6	15.8	None	6.3	15.8	None	21.3	15.8	6.0
Other Boating	"	1.9	25.5	None	4.1	25.5	None	14.6	25.5	None
Picnicking	"	4.8	3.8	1.0	10.3	34.4	None	36.9	34.4	2.5
Wood-Fiber Products	MMBF	11.71	9.98	1.73	15.35	10.0	5.35	17.71	10.0	7.71
Livestock Production	AUM's	16,756	16,756	None	19,101	15,896	3,205	24,128	15,896	8,232
FS Lands										
Livestock Production	AUM's	3,690	3,690	None	4,207	3,690	517	5,314	3,690	1,624
Private Lands in River Corridor										
Minerals (River Corridor)	TONS	Unquantified	Presently none	Unquantified	Unquantified	Unquantified	Unquantified	Unquantified	Unquantified	Unquantified

^{1/} MVD = Thousand Visitor Days
MMBF = Million Board Feet
AUM = Animal Unit Months

Specification of Objective Components is the next step in formulating the major alternative plans. The components are of concern to the nation through the supply/demand analysis, and are related to the use and management of the resources in the area. In addition, they are defined so that the type, quantity and quality of effect are evident. Finally, the components are those which can be substantially influenced through the alternative plans. The study team used the combined data for both the river corridor and the Piedra Valley for specifying components of the NED and EQ alternatives.

National Economic Development Components. The description of the Piedra basin in Chapter II and the study report shows the basin to be largely resource oriented. Major goods and services produced are wood products, outdoor recreation and agriculture products. The public has identified these as local economic concerns as well as products of national significance. Exploration and potential development of nuclear minerals and other energy resources such as gas, coal and oil were identified as concerns for economic development but their potential is largely unknown.

National Economic Development can be served by increasing the production of any of these components, provided the share of national demand allocated to the Piedra Unit exceeds the current projected supply. More efficient production of these goods and services will also contribute to the NED objective.

The resource supply/demand analysis (Table VIII) indicates that by 1985 demand for a number of resources and uses in the Piedra drainage--wood fiber, agriculture, numbers of big game animals, and outdoor recreation activities of camping and trail use--will exceed the supply. By 2000 the demand will exceed supply for all resource uses and activities except driving for pleasure, power boating on Williams Creek Reservoir and number of elk to achieve a reasonable hunter success.

Based on the comparison of demand to supply, the following components of NED identified:

- 1) production of wood fiber
- 2) output of outdoor recreation
- 3) production of agricultural products
- 4) production of big game animals (hunting opportunity)
- 5) output of mineral production
- 6) output of hydro-electric energy production

A second level specification was made to determine which components and their sub-parts are relevant to the Piedra River corridor. NED second level components include:

- 1) increase or maintain current levels of wood fiber production
- 2) increase outdoor recreation opportunity
 - camping
 - big game hunting
 - fishing
 - hiking and other trail uses
 - white water boating
 - picnicking
- 3) increase forage for livestock on National Forest lands
- 4) increase output of mineral production in the river corridor

In the second level specification some of the components or sub-parts were deleted:

- 1) Agricultural production on private lands was not considered because the Forest Service does not have authority to enter into programs that would increase productivity on private lands. In one instance, additional production due to irrigation development on new lands could be achieved; however, this proposal has its impact on the segment of the East Fork which was found to be not eligible for inclusion into the national wild and scenic rivers system. Generally all irrigable private lands within and adjacent to the river are currently irrigated. Agriculture production could not be increased as a result of actions taken under the auspices of the Wild and Scenic Rivers Act. There are, however, various programs sponsored by the Soil Conservation Service that could increase agriculture production.
- 2) Production of hydroelectric energy was deleted because of low potential. In 1956, the Bureau of Reclamation reported a negative benefit/cost ratio for the O'Neal Project (⁸ Op. Cit.). The increased cost of equipment, labor and materials, since 1956, makes a positive benefit/cost ratio for power generation unlikely.
- 3) Coal and geothermal energy resource were not considered. The U. S. Department of the Interior (EMARS ⁷ Op. Cit.) studies indicate there is no known coal and geothermal areas within the study area.
- 4) Specific numbers of big game animals were deleted because control of numbers relative to hunting pressure, success ratios and residual herd size is a function of hunting seasons and permits under the direct control of the State Division of Wildlife. The Forest Service procedurally only makes recommendations to the State regarding big game animal management.

Environmental Quality Components. The following components for environmental quality identified:

- 1) preserve and protect river segments with wild, scenic, or recreational character
- 2) protect and maintain "outstandingly remarkable" resource values along the river corridor
- 3) protect and maintain water and air quality
- 4) maintain and protect habitat of threatened or endangered species
- 5) protect and preserve archaeologic resources
- 6) avoid irreversible and irretrievable commitments of resources and preserve freedom of choice for future generations

EQ components identified in the second level specification are:

- 1) preserve and protect
 - 32.5 miles of river with wild character
 - 12.9 miles of river with scenic character
 - 5.5 miles of river with recreational character
 - restore 2.5 miles of river to free flowing character that was found determined to be ineligible

- 2) maintain the identified outstandingly remarkable river values
 - scenery
 - geology
- 3) maintain existing water quality by continuing to meet or exceed current standards
- 4) maintain and protect the peregrine falcon habitat
- 5) protect and preserve known archaeological sites
- 6) avoid irreversible and irretrievable commitments of resources and maintain freedom of choice

One EQ component was deleted in the second level specification. Maintaining and enhancing air quality was eliminated since this is not a direct purpose of the wild and scenic rivers legislation. However, statutes, regulations and policies are recognized in current and proposed management of the river. The ephemeral nature of air quality at any given time makes it difficult, if not impossible, to quantify.

The third step of the formulation process was to develop and test alternatives which contributed to satisfaction of the NED and EQ objectives and those suggested by the public. Initially, five alternative plans were considered. They were:

- 1) Designate the river with each segment being classified at their most restrictive level of classification suitability as determined by the study team. This alternative reflects the EQ objective which is defined by the Water Resources Council as society's preference to enhance the quality of the environment by the management, conservation, preservation, creation, restoration, or improvement of the quality of certain natural and cultural resources and ecological systems. Management of the classified river segments would be in accordance with the objectives adopted by USDI-USDA, February, 1970.
- 2) Designate the river with all the eligible river segments classified as scenic except for the lower segment which is suitable only for recreational. This EQ alternative reflects concerns expressed by a portion of the public which were interested in less restrictive classification management objectives, but feel the river should be protected from dams and other significant developments.
- 3) Designate the river with all river segments classified as recreational. (Those segments eligible for wild and scenic are also eligible for recreational.) This alternative reflects the concerns expressed by the public for protecting the river from dams, but maintaining the least restrictive management for other resources and land uses.
- 4) Designate only those segments of the river crossing National Forest land according to their classification suitability. This alternative reflects the comments of some landowners, several environmental groups and other concerned citizens.
- 5) Designation of only the Piedra mainstem from Forest Service Road 631 down to Colorado Highway 160. This was the original proposal for establishing the river as a study river. Throughout the first phase of the study, many who generally oppose wild and scenic river status said that the original study proposal was satisfactory.

These alternatives were tested initially against the evaluation criteria in Chapter III. After the initial testing the study team dropped alternatives 2, 4, and 5 because they did not provide a significant difference in NED and EQ outputs when compared to alternatives 1 and 3 or no designation.

In addition the study team believes that alternatives 4 and 5 also abridge the intent of Congress when it established the study boundaries of the study through Public Law 93-621, as amended by Title VII of Public Law 94-486.

In summary, the alternatives were developed through application of potential activities under law and regulation and public inputs. They were formulated, tested, refined and retested. Two designation alternative plans and one no-designation plan emerged through the process.

B. ALTERNATIVES CONSIDERED

River Designation Plan I:

All eligible segments of the river would be classified at their most restrictive level of classification suitability. The designation would include 32.5 miles classified as Wild; 12.9 miles classified as Scenic; and 5.5 miles classified as Recreational. The wild, scenic, and recreational segments would be managed to meet their respective classification objectives. That

portion of the wild segments located within the Weminuche Wilderness would be managed in accordance with direction established by proposed management for the Wilderness.

River Designation Plan II:

All eligible segments of the river (51 miles) would be classified as recreational. The river would be managed to meet the management objectives for recreational rivers. Those segments within the Weminuche Wilderness would be managed in accordance with direction established by proposed management for the Wilderness.

No Designation Plan:

The eligible segments of the river would not be given statutory protection under the Wild and Scenic Rivers Act. Management of the river would continue under other existing authorities of law and regulation. Specific direction for National Forest lands would be developed and identified through the Forest Service's land management planning process. Management of the private lands in the river corridor would be under applicable State law and County regulations. Those segments located within the Weminuche Wilderness would be managed in accordance with direction established by proposed management for Wilderness.

Map #3 shows the alternative plans.

MAP#3 ALTERNATIVE PLANS

ALTERNATIVE PLAN I



WILD CLASSIFICATION
SCENIC CLASSIFICATION
RECREATIONAL CLASSIFICATION

ALTERNATIVE PLAN II



RECREATIONAL CLASSIFICATION

ALTERNATIVE PLAN

NO DESIGNATION OR
CLASSIFICATION



EFFECTS OF IMPLEMENTATION

V



1



2



3

- 1) Private property under irrigation.
- 2) Piedra River between Weminuche and Sand Creeks.
- 3) Rafters looking downstream for the next series of rapids in Second Box Canyon.

V. EFFECTS OF IMPLEMENTATION

A. ASSUMPTIONS

The Wild and Scenic Rivers Act has an overall effect of maintaining status quo for the eligible rivers. Past uses and development along the Piedra River corridor have resulted in the reaches of the river that could be impacted by other land and resource uses is already affected. The following management assumptions and situations exist as a basis for estimating outputs.

ALTERNATIVE PLAN I:

Resource Uses and Developments. Resource trends for the corridor will remain essentially the same as under Alternative Plan II. Timber harvest in all segments (except the lower segment classified recreational) would be prohibited. When existing recreation, range management and other non-trail management facilities become irreparable, they would not be replaced. This would not affect developed recreation site capacity because new sites are available for development outside the river corridor. Water use developments now constructed would continue to be maintained. Exploration for minerals would be prohibited in the river corridor.

Transportation and Land Ownership. Transfer of private land to public ownership in fee title is not needed. Controls preventing environmental degradation on private lands would be acquired through scenic easements. Uses on private lands would be limited to current activities. Lands now used for livestock operations would be restricted to that use. The transportation system for the Piedra basin would be limited to existing river crossings. Trails along the wild segment would be closed to motorized vehicles.

Environmental/Land Use Impacts. No adverse environmental impacts resulting from wild and scenic classification are foreseen. Potential environmental degradation caused by increased recreation can be mitigated through controls over user numbers in the wild and scenic segments.

ALTERNATIVE PLAN II:

Resource Uses and Development. Timber harvest could occur in the river corridor but not in the immediate future. Recreation uses would continue increasing. The existing balance between motorized and non-motorized dispersed recreation facilities could be met by including some camping sites along with construction of boater put-in and take-out facilities. Exploration for minerals would be prohibited in the river corridor.

Transportation and Land Ownership. Transfer of private lands to public ownership in fee title is not needed. Controls, where possible, would be acquired through easements. Recreational classification would encourage water front homesite development on private lands.

Environmental/Land Use Impacts. Management of National Forest lands would not result in any major impacts. On private lands, adverse impacts from increased homesite development could be avoided by acquiring scenic easements; however, this does not assure a lower level of intensive developments than currently exist.

The major overall environmental impact would be the change or loss of existing wild and scenic values being managed under recreational objectives. These values, on the segments where they now exist, could be changed to the less restrictive value and amenities of recreational classification.

NO RIVER DESIGNATION:

Resource Uses and Development. Timber harvest would occur in the corridor along the East and Middle Forks where stands have been harvested in the past and are now under management. Harvest in these areas would not occur in the near future; approximately 40 years are left in the management rotation. If aerial logging technology should become cost/effective for the San Juan Forest, the entire corridor could be harvested in accordance with prescribed silvicultural treatments for individual tree species.

Recreation use will continue to increase but demand for additional site capacity will be met outside the river corridor. Existing motorized dispersed recreation activities on trails along the river would continue at current levels since most opportunity for range improvement is located on those portions of the allotments outside the river corridor.

Exploration for leasable minerals is expected to increase. The number of drill sites and access roads would increase. The potential for hydroelectric energy would exist with an improved benefit/cost ratio.

Livestock grazing and irrigated pastures would continue to be the predominant uses of private lands. There would probably be an increase of private land sales for homesites with river frontage.

Transportation and Land Ownership. There would be no transfer of private lands to public ownership. Furthermore, scenic and access easements would not be acquired, resulting in few constraints on use of private lands.

To provide for more efficient timber harvest and loop recreation drives could result in one or two more river crossings on the East and Middle Forks.

Environmental/Land Use Impacts. Management of National Forest lands within the corridor would not result in any significant impacts that could not be mitigated through the use of standard management techniques. Scenic values can be protected through screening and management to meet visual quality objectives. Impacts of mineral exploration will continue although minimized through obliteration of the drill sites and closing the access roads.

The impact of development on private lands will result in the loss of rural scenery and may also result in stream shore modifications. Water quality may be depreciated through ineffective sewage systems.

B. OUTPUTS

A system of public information accounts was used to display the effects of implementation of the alternative plans. The four accounts are: National Economic Development, Environmental Quality, Regional Development and Social Well Being. The National Economic Development and Environmental Quality accounts should not be confused with alternative plans for National Economic Development and Environmental Quality.

To show the effect of river classification on overall community economic and environmental concerns, current direction or the no designation alternative, is developed for the Piedra Valley including the river corridor. The outputs of the classification plans are expressed as changes from outputs of goods and services from the entire drainage.

Output estimates are displayed in Table IX. They were derived from ELU suitability/capability and past trends (see Appendix B-11).

Wood Fiber: For the no classification alternative, wood fiber components of special, standard and marginal were derived from assessing the potential as indicated by the ELU's.

The ecological potential for harvest under a sustained yield concept (cutting during a planning period does not exceed growth) is the basis for the wood fiber output. The output was determined through application of RAM; a computer resource allocation model designed to generate cutting and reforestation schedules for commercial Forest lands. The worksheets and computer documents are on file in the Supervisor's Office of the San Juan National Forest.

Recreation: Output estimates are derived from projections of Recreation Information Management data. Increases in recreation uses and developed site capacity are based on needs to accommodate increased river use. New trails, reopening obliterated trails and managing the transportation system were also considered. Outputs for recreation developments on private lands are acknowledged but were not quantifiable.

TABLE IX
NED ACCOUNT COMPONENT OUTPUTS BY ALTERNATIVE

Component Need	Unit	Increases/Decreases		
		No River Designation	Alternative Plan I	Alternative Plan II
Wood Products	MBF	29,800	-4000	-4000
Annual Cost		\$365,000	-\$5,000	-\$5,000
Outdoor Recreation Thousand Visitor Days				
Camping	"	212.4	+11.0	+11.0
Hunting	"	11.0	No Change	No Change
Fishing	"	32.7	-0.1	-0.1
Hiking & Other	"	29.0	+1.0	+1.0
Trail Uses				
White Water Boating	"	1.2	+5.1	+5.1
Other Boating	"	4.1	No Change	No Change
Picnicking	"	4.8	+0.1	+0.1
Annual Costs		\$386,000	+\$69,000	+\$69,000
Domestic Livestock	AUM	14,427	No Change	No Change
Annual Costs		\$ 76,000		
Minerals and Gas and Oil Exploration (No Current Production)	Acres for Entry	204,800	16,200 acres closed to entry for exploration and production	

Domestic Livestock (Agriculture): Projected outputs are derived from existing carrying capacity, permit obligations and allotment improvements identified in existing allotment management plans.

Wildlife: Wildlife and hunting projections are based upon interpolations of the State of Colorado's Wildlife Management Strategy plans (see pages 1-18).

Minerals and Energy: Minerals and energy for leasable materials and resources are not quantifiable in specific amounts. This analysis only identifies constraints on exploration and potential development.

C. VALUES

The user expenditures for each output and activity within the watershed were processed through an economic input-output model to determine the impact on each of several economic indicators for each alternative. The projected 1980 San Juan sub-region input-output model from the Upper Colorado Region Comprehensive Framework Study--Economic Base and Projections, June 1971, was used in this analysis. The user expenditure data was updated with the current price index (December, 1976) to make the relationships as current as possible. Direct annual income was considered to be a national impact and therefore displayed in the NED account (Table X). Whereas the Regional impact includes both direct and indirect annual income. Gross Regional Product, and regional employment are also shown in the RD account. The input-output model provided final demands for resources converted to direct income and employment through coefficients for labor, income and value added. The NED account considered direct effect and was not expanded to indirect effects within the national economic sectors. For the Regional Development account, the economic sectors were expended to determine the indirect effects. The indirect impacts within a region are assumed to be offset by an equal loss in other regions of the nation. Therefore the net indirect impact to the nation is zero. However, to the region in question, indirect impacts are real, hence added in the RD account.

D. NED ACCOUNT

Table IX displays the additions of outputs and costs for each river alternative. These data were then entered into the economic input-output model for southwestern Colorado. This model determined values and employment by economic sector for each river alternative plan. Table X shows the results of the economic analysis of the alternatives.

E. EQ ACCOUNT

The environmental quality account provides a comparison of the effect of the plans on the components of the EQ account. Table XI shows the effects that are complementary to the EQ component objective and the potential effects that are non-complementary in that the effects can be depreciative on the values for which the action is to protect.

F. REGIONAL DEVELOPMENT ACCOUNT (RD)

This account differs from the NED account by showing direct and indirect economic activity within the area induced by the alternatives. In the NED account, the indirect economic activity was not determined. Dispersed economic sectors and values of goods and services produced and leaving the region are offset by an equal value of loss by not being consumed in the region, also in the NED sphere. Table XII shows the alternative effects for Regional Development.

TABLE X
ALTERNATIVE EFFECTS ON NATIONAL
ECONOMIC DEVELOPMENT

ACCT. COMPONENT	NO RIVER DESIGNATION	RIVER DESIGNATION
Wood Fiber (Annual Output in MBF)	29,800	29,400
Sub Total Direct Annual Income (\$) <u>1/</u>	\$2,614,000	\$2,579,000
Sub Total Annual Costs (\$)	\$ 365,000	\$ 360,000
Sub Total Direct Employment (Man Years)	247.3	244.0
Outdoor Recreation		
Camping (Annual Output in Recreation Visitor Days)	212,400	223,400
Hunting "	11,000	11,100
Fishing "	32,700	34,000
Trail Uses "	29,000	33,000
White Water		
Boating "	6,300	6,300
Other Boating "	4,100	4,100
Picnicking "	4,800	4,850
Total Annual Recreation Visitor Days	300,000	316,750
Sub Total Direct Annual Income (\$)	\$ 468,000	\$ 476,000
Sub Total Annual Costs (\$)	\$ 313,000	\$ 349,000
Sub Total Direct Employment (Man Years)	53.0	55.5
Discounted Annualized Cost of Easements <u>2/</u>	-----	\$ 106,000
Domestic Livestock (Annual Output in AUM's)	14,427	14,427
Sub Total Direct Annual Income (\$)	\$ 180,000	\$ 180,000
Sub Total Annual Costs (\$)	\$ 76,000	\$ 76,000
Sub Total Direct Employment (Man Years)	6.9	6.9
Minerals Locatable and Leasable (Opportunity costs)	16,200 acres available for entry under mining and leasing laws.	16,200 acres with-drawn from entry
Transportation System Development Costs <u>3/</u>	\$ 160,000 <u>3/</u>	\$ 160,000
Grand Total Annual Income	\$3,262,000	\$3,235,000
Grand Total Annual Costs <u>4/</u>	\$ 914,000	\$1,051,000

1/ All \$ figures rounded to nearest \$1000 from the basic computations. All capital construction costs annualized and discounted at 6-3/8% for 20 years (planning life for facility).

2/ Easement costs annualized and discounted at 6-3/8% for 50 years.

3/ Transportation costs for roads itemized separately since they benefit all of the resource functions. Trail costs included in recreation.

4/ Government costs, private costs are not included.

TABLE XI
EFFECTS ON COMPONENTS OF THE EQ ACCOUNT

Component Needs	Unit	Amount Provided By No River Designation	River Classification Alternative Plans		*only apply to the corridor	
			River Classification Alt. I Complimentary Non-Complimentary		River Classification Alt. II Complimentary Non-Complimentary	
Designate National Wild, Scenic, or Recreational River	Miles	None	Protects: 32.5 miles w/wild character; 12.9 miles w/scenic character; 5.5 miles w/recreational character.	None	Protects 51 miles of river with recreational classification.	River designation could attract excessive recreation use; resulting in environmental problems of overuse, vandalism, and litter on private lands. Use controls will have to be initiated. Management constraints not at highest classification possibilities possible.
Maintain and Protect peregrine falcon Habitat	Unquantified	Presently authorized through existing law and regulation.	Reduction of development activities on private lands near the aerie.	Increased river use may create recreation user harassment.	Reduction of development activities on private lands near the aerie.	Increased river use may create recreation user harassment.
Protect and Preserve Historic, Cultural, and Archaeological Sites	Sites	Presently authorized through existing law and regulation.	No additional benefits except controls over sites (when found) on private lands.	Classification of river may result in increased and more dispersed recreation use. This may result in vandalism or unauthorized artifact collection.	No additional benefits except controls over sites (when found) on private lands.	Classification of river may result in increased and more dispersed recreation use. This may result in vandalism or unauthorized artifact collection.
Maintain and Protect Existing Water Quality	State and Federal Standards	Current water quality subject of management constraints on a project by project basis.	Reduces opportunity for subdivision, industrial or commercial development pollution sources.	None	Reduces opportunity for industrial or commercial development pollution sources in the river corridor.	None
Maintain and Protect Scenic Qualities of the Valley	Visual Management Objective Acres	Visual management objectives not established for unit and river corridor.	Retain the rural scenery on private lands along the river.	None	Retain the natural scenic character on 10,500 acres of public lands in the river corridor.	The scenery in the wild and scenic segments could be downgraded to recreational standards.
Avoid Irreversible Commitment of Land and Resources and Preserve Freedom of Choice	Activities	No assurances.	Assures long term options for open space on private lands along the river.	Classification level management constraints will limit management options for controlling use.	Assures long term options for non-consumptive uses in the river and its immediate environment.	None

TABLE XII

ALTERNATIVE EFFECTS ON REGIONAL DEVELOPMENT

ACCT. COMPONENT	NO RIVER DESIGNATION	RIVER DESIGNATION
Gross Regional Product Generated		
Wood Fiber	\$4,420,000	\$4,361,000
Agriculture (Domestic Livestock)	252,000	252,000
Agriculture (All Other)	3,000	3,000
Services (Recreation & Tourism)	325,000	330,000
Trade and Manufacturing	458,000	476,000
Minerals & Energy Production	52,000	52,000
All Other Economic Sectors	396,000	376,000
Total Gross Regional Product	\$5,906,000	\$5,850,000
Regional Income Generated		
Wood Fiber	\$3,758,000	\$3,708,000
Agriculture (Domestic Livestock)	190,000	190,000
Agriculture (All Other)	2,000	2,000
Services (Recreation & Tourism)	269,000	273,000
Trade and Manufacturing	395,000	410,000
Minerals & Energy Production	36,000	36,000
All Other Economic Sectors	274,000	279,000
Total Regional Income	\$4,924,000	\$4,898,000
Regional Employment Generated (Man Years)		
Wood Fiber	327.5	323.2
Agriculture (Domestic Livestock)	7.2	7.2
Agriculture (All Other)	0.1	0.1
Services (Recreation & Tourism)	36.9	37.6
Trade and Manufacturing	36.1	37.4
Minerals & Energy Production	0.8	0.8
All Other Economic Sectors	15.0	15.7
Total Regional Employment Generated	423.6	422.0

G. SOCIAL WELL BEING ACCOUNT

Social well being is defined as the number of choices people can make. When choice is broadened, social well being is enhanced or improved. Components of the social well being account were specified from the conflicts of choice resulting in the polarity of the issues in the study. The components of the account are:

- 1) Private Ownership Rights: This component is derived from perhaps the strongest and most widely expressed concern of local citizens. A summary of this concern is that private landowners wish to retain the choice to do with their lands as they determine what's best.
- 2) Maintaining Way of Life: This component was strong local input concerning livelihood. In essence, the ranchers wanted to remain in ranching; timber workers wish to continue working in the wood fiber industry; etc.
- 3) Educational and Cultural: The concern of alternative plan effects on educational and cultural opportunity.
- 4) Real Income Distribution: The effects of the alternative plans on the real income of classes or groups of people.
- 5) Health and safety: Plan effects on health and safety other than those evaluated monetarily for the National Economic Development account.
- 6) Emergency Preparedness: The effects of the alternative plans on reserve capacities and flexibilities in resource systems and protection against interruption of flow of essential goods and services at times of national disaster or critical need.
- 7) Freedom of Travel: The choice of going where and by what means.

A listing of the alternative effects on social well being is summarized in Table XIII.

H. IRREVERSIBLE AND IRRETRIEVABLE EFFECTS

Short and long term impacts to the environment resulting from the alternative plans are minimal because designation of the river is an environmental protection action. Although the alternative plans favoring designation foreclose certain short range opportunities, the effect is not permanent inasmuch as the river can be removed from the system at such time the Congress determines national interest would be served to do so.

Alternative Plans I and II do not appear to have any irreversible effects. Actions under these alternatives strive to maintain the existing quality of the river and its immediate environment. Other resource uses and activities that would be curtailed or prohibited could resume in the long term if national need dictates the removal of the river from the Wild and Scenic Rivers System.

The opportunity for short range mineral exploration, timber harvest and additional water use developments is foreclosed. Irretrievable losses of timber would approximate 400,000 board feet per year. One proposed, but unplanned, water development would be foreclosed. The proposed O'Neal irrigation and hydro-electric project would be foreclosed; however, the initial planning established that the O'Neal project has a negative benefit/cost ratio and would not be actively considered unless the economic situation changes drastically.

The major irreversible effect of the No Designation Plan is the depreciation and loss of the current scenic qualities for which the river is eligible. Lacking State and County controls, the private lands in the river will be gradually sub-divided and the open space and pastoral qualities would be lost.

Water quality would deteriorate as developments along the river occur. Additional water use developments would accelerate decline in water quality by decreasing the dilution capability of the river.

I. EFFECTS SUMMARY

Table XIII provides a summary of effects of river classification on the four accounts of the Water Resources Council's "Principles and Standards". The summary displays the effects of river designation Alternative Plans and current direction for management of National Forest lands in the Piedra Valley.

TABLE XIII

ACCT.	UNIT	COMPONENT NEED	NO RIVER DESIGNATION	ALTERNATIVE PLAN I		ALTERNATIVE PLAN II	
				Total Net Difference		Total Net Difference	
N	MBF	Wood Fiber (Annual Output in MBF)	29,800	29,400	-400	29,400	-400
A		Sub Total Direct Annual Income (\$)	\$2,614,000	\$2,579,000	-\$35,000	\$2,579,000	-\$35,000
T		Sub Total Annual Costs (\$)	\$ 365,000	\$ 360,000	-\$ 5,000	\$ 360,000	-\$ 5,000
I	MAN	Sub Total Direct Employment	247.3	244.0	-3.3 man years	244.0	-3.3 man years
O	YEARS						
N		Outdoor Recreation					
A	RVD	Camping (Annual Output in Recreation Visitor Days)	212,400	223,400		223,400	
L	RVD	Hunting "	11,000	11,100		11,100	
E	RVD	Fishing "	32,700	34,000		34,000	
C	RVD	Trail Uses "	29,000	33,000		33,000	
O	RVD	White Water					
		Boating "	6,300	6,300		6,300	
N	RVD	Other Boating "	4,100	4,100		4,100	
O	RVD	Picnicking "	4,800	4,850		4,900	
M		Total Annual Recreation Visitor Days	300,300	316,750	16,850	316,800	16,850
I		Sub Total Direct Annual Income (\$)	\$ 468,000	\$ 476,000	\$ 8,000	\$ 476,000	\$ 8,000
C		Sub Total Annual Costs (\$)	\$ 313,000	\$ 349,000	\$36,000	\$ 349,000	\$36,000
D	MAN	Sub Total Direct Employment	53.0	55.5	+2.5 man years	55.5	+2.5 man years
E	YEARS	Discounted Annualized Cost of Easements	----	\$ 106,000		\$ 106,000	
V		Domestic Livestock (Annual Output)	14,427	14,427		14,427	
E	AUM	Sub Total Direct Annual Income (\$)	\$ 180,000	\$ 180,000		\$ 180,000	
L		Sub Total Annual Costs (\$)	\$ 76,000	\$ 76,000		\$ 76,000	
O							
P							
M	MAN	Sub Total Direct Employment	6.9	6.9		6.9	
E	YEARS						
N							
T	TONS	Minerals (Locatable)	No Known Production	16,200 acres withdrawn from entry.		16,200 acres withdrawn from entry.	
	BARRELS	Gas & Oil (Leasable)	No Known Leasing	16,200 acres withdrawn from leasing.		16,200 acres withdrawn from leasing.	
		Transportation System Development Costs	\$ 160,000	\$ 160,000	NONE for river management.	\$ 160,000	NONE for river management.
		Grand Total Annual Income	\$3,262,000	\$3,235,000		\$3,235,000	
		Grand Total Annual Costs	\$ 914,000	\$1,051,000		\$1,051,000	

ACCT.	UNIT	COMPONENT NEED	NO DESIGNATION	ALTERNATIVE PLAN I
E N V I R O N M E N T A L	MILES	Protect and maintain rivers with Wild, Scenic and Recreational character.		
		Wild	None - Free flowing and environmental character not guaranteed.	32.5 miles protected through designation.
		Scenic	None	12.9 miles protected through designation.
		Recreational	None	5.5 miles protected through designation.
Q U A L I T Y	UNQUANTIFIED	Maintain and protect Peregrine Falcon habitat.	Presently authorized under existing law and regulation.	Classification may induce harassment through increased recreation use. Development which may result in harassment would be controlled on private lands.
	SITES	Protect and preserve historic, cultural and archaeological resources.	Presently authorized under existing law and regulation.	Controls established over sites found on private lands. Increased river use may result in unauthorized finding and collecting.
	STANDARDS	Maintain and protect existing water quality.	Current water quality subject to management constraints on a project by project basis.	Reduces opportunity for pollution resulting from commercial, industrial, agriculture, and habitation development along river.
	UNQUANTIFIED	Maintain and protect scenic qualities of the river corridor.	Visual management objectives in in corridor subject to partial modification on National Forest land.	Scenic qualities would be maintained along 45.4 miles. Scenery on private lands could be protected from most modifications except lower 5.5 miles which would be subject to habitation modification.
	ACTIVITY	Avoid irreversible and irretrievable commitment of the river corridor and its resources and preserve freedom of choice.	No assurances.	Commodity resource loss is irretrievable, but future choice remains open for their use through legislative action.

ALTERNATIVE PLAN II

None - Wild values may be degraded
Under management for recreational
objectives.

None - Scenic values may be slightly
degraded under management for
recreational objectives.

51 miles protected through designation.

Classification may induce harrassment
through increased recreation use.
Development which may result in harass-
ment would be controlled on private lands.

Controls established over sites found on
private lands. Increased river use may
result in unauthorized finding and
collecting.

Reduces opportunity for pollution result-
ing from commercial and industrial
development along the river.

Scenic qualities may have modification to
implement management practices. Scenery on
private lands could be modified for habi-
tation development.

Irreversible trends may be established due
to habitation development on private lands.
Commodity resource loss is irretrievable,
but future choice remains open for their
use through legislative action.

ACCT.	UNIT	COMPONENT NEED	NO DESIGNATION	ALTERNATIVE PLAN I		ALTERNATIVE PLAN II
					Total Net Difference	Total Net Difference
R		Gross Regional Product Generated				
E		Wood Fiber	\$4,420,000	\$4,361,000		\$4,361,000
G		Agriculture (Domestic Livestock)	252,000	252,000		252,000
I		Agriculture (All Other)	3,000	3,000		3,000
O		Service (Recreation & Tourism)	325,000	330,000		330,000
N		Trade and Manufacturing	458,000	476,000		477,000
A		Minerals & Energy Production	52,000	52,000		52,000
L		All Other Economic Sectors	369,000	376,000		377,000
		Total Gross Regional Product	\$5,879,000	\$5,850,000	-\$29,000	\$5,852,000
D						-\$28,000
E		Regional Income Generated				
V		Wood Fiber	\$3,758,000	\$3,708,000		\$3,708,000
E		Agriculture (Domestic Livestock)	190,000	190,000		190,000
L		Agriculture (All Other)	2,000	2,000		2,000
O		Services (Recreation & Tourism)	269,000	273,000		273,000
P		Trade and Manufacturing	395,072	410,000		411,000
M		Minerals and Energy Production	36,000	36,000		36,000
E		All Other Economic Sectors	274,000	279,000		280,000
N		Total Regional Income	\$4,924,000	\$4,898,000	-\$26,000	\$4,900,000
T						-\$24,000
		Regional Employment Generated (Man Years)				
		Wood Fiber	327.5	323.2		323.2
		Agriculture (Domestic Livestock)	7.2	7.2		7.2
		Agriculture (All Other)	0.1	0.1		0.1
		Services (Recreation & Tourism)	36.9	37.6		37.6
		Trade and Manufacturing	36.1	37.4		37.6
		Minerals & Energy Production	0.8	0.8		0.8
		All Other Economic Sectors	15.0	15.7		15.8
		Total Regional Employment Generated	423.6	422.0	-1.6 man years	422.3
						-1.3 man years

ACCT. UNIT	COMPONENT NEED	NO DESIGNATION	ALTERNATIVE PLAN I
S O C I A L W E L L B E I N G	Private Ownership Rights	The landowner choices to manage or dispose of private lands is only constrained by state law and county regulations	Choice for development of private lands subject to scenic easement negotiations.
	Maintaining Way of Life	Maintain wide choice of livelihood in all economic sectors.	Maintains current choice levels for livelihood in most economic sectors. The wood fiber sector has a loss of 4.3 man years for choosing from.
	Education and Culture	Diversity of choice enhanced through programs offering environmental, physical and economic support.	Diversity of choice enhanced through programs offering environmental, physical and economic support.
	Real Income Distribution	Indepth economic study not undertaken for this component.	
	Health and Safety	Neutral for this component.	Neutral for this component.
	Emergency Preparedness	Unit open for mineral and energy exploration and development.	16,200 acres withdrawn from mineral and energy entry.
	Freedom of Travel	No restrictions on regional transportation - access within unit significantly increased.	Loop roads crossing the river for recreation drives and other resource use will not be constructed.

ALTERNATIVE PLAN II

Choice for development of private lands subject to scenic easement negotiations.

Maintains current choice levels for livelihood in most economic sectors. The wood fiber sector has a loss of 4.3 man years for choosing from.

Diversity of choice enhanced through programs offering environmental, physical, and economic support.

Neutral for this component.

16,200 acres withdrawn from mineral and energy entry.

Loop roads crossing the river for recreation drives and other resource use will not be constructed.

ALTERNATIVE EVALUATION

VI



1



2



3



4

- 1) Confluence of the East and Middle Forks.
- 2) Fishing in a grotto formed in cliffs along the East Fork.
- 3) East Fork below Deadman Creek.
- 4) Private ranch lands along the East Fork.

VI. ALTERNATIVE EVALUATION

In the previous chapter on the effects of alternatives, the analysis revealed a minimum of difference among alternatives. The following discussion of the alternative plans discusses how the alternatives compare with each other in satisfaction of the evaluation criteria located in Chapter III.

A. Overall Congressional Policy and Intent: Alternatives I and II provide statutory authority for maintaining current free flowing character of 51 miles of the Piedra River and its headwaters. Free flowing character can be maintained under no designation; however, future development proposals that depreciate free flowing character would have to be considered under other legal authorities. Alternative III does not provide the statutory protection as do I and II.

In meeting Congressional intent, Alternative I and II provide legal authority for the managing agency to acquire easements for protection and public use of the river and its environment on private lands. The No Designation Plan does not provide this authority to the managing agency.

B. Goal Satisfaction: Table XIV displays the subjective response of each alternative plan in meeting the concerned goals of the U. S. Forest Service and State of Colorado.

Each alternative provides a response in meeting the goals of the evaluation criteria. Each of the alternatives provide for maintaining existing developed recreation sites. The No Designation Plan increases the opportunity for dispersed recreation by allowing a greater variety of dispersed activities. Alternative I decreases the activities by restricting motorized dispersed activities. The management objectives for Alternative II do not detract from current dispersed activities nor would they particularly encourage emphasis for dispersed activities.

Alternative I does more to protect big game winter range and migration routes through the management objectives for more restrictive controls over developments on private lands. Alternative II, through the management objectives for recreational rivers, provides the same degree of protecting big game values on public lands along the Piedra but not on private lands. This is a result of the management objectives allowing a greater degree of latitude for dwellings in the recreational segments. The No Designation alternative does not establish any controls on private lands concerning maintaining and protecting big game ranges. On the public lands along the river these goals would be continuing concerns in all future resource use decisions. There is only a slight difference in the alternative effects relating to the economic related goals of livestock grazing and timber harvest.

Livestock grazing under each alternative could continue under existing grazing capabilities of the range. Alternatives I and II foreclose opportunity for most vegetative manipulation and structural improvements that could increase livestock carrying capacity. However, these opportunities are generally limited by the physical nature of the river corridor.

The only adverse economic impact of Alternative I is the annual loss of 400 MBF of timber supplied to local dependent industries. The amount of wood fiber volume lost to the economy has little significance since percentagewise it is less than the allowable statistical error of the initial forest stand measurement. These losses to the economy are also, in part, offset by increases in the recreation sector of the economy. Also the existing transportation system can serve other resource uses within the drainage without need for any new roads that would parallel or cross the river corridor. As in Alternative I, Alternative II has a loss of 400 MBF of timber supplies to the local dependent industry. This is, in part, also mitigated by increases of the local economy within the recreation sector. Under no designation, the economic sector would not experience the adverse impact of losing 400 MBF of timber harvest each year. Continued timber harvest opportunity in the river corridor would be located on the Middle and East Fork drainages. The corridor on the main stem with its canyons would continue to be unacceptable for timber harvest because of ecological land unit constraints unless economic and technical capability allow for timber harvest without roads.

The state goal of preserving Colorado's agriculture lands is enhanced by Alternative I through the end result of scenic easements that would prevent private lands in the wild and scenic segments from being subdivided. Alternative II offers less restrictive controls, through the management objectives for recreational rivers, for conversion of agricultural lands to home sites. No designation provides no controls to the managing agency to aid the state in meeting this goal. As the current agriculture economic situation continues, private land sales for building sites is expected to continue.

State wildlife concerns will remain largely unaffected under the three alternative plans. Alternatives I and II would provide a greater degree of protection for wildlife habitat than no designation, but they do increase the difficulty for the public to get into the river corridor to enjoy the wildlife values whether the interest is visual, photography or hunting.

Alternative I best meets the goal of preserving the beauty of the state by preventing gradual depreciation of the natural scenery resulting from activities allowed under the management objectives for Alternative II and No Designation.

TABLE XIV
GOAL SATISFACTION

Goal Abstract	Alternative Plan I Response	Alternative Plan II Response	No Designation Response
a. Maintain Current Developed Recreation Sites	provided for	provided for	provided for
b. Increase Emphasis on Dispersed Recreation	opportunity increased	plan is neutral	opportunity in- creased
c. Protect Big Game Winter Range & Migration Routes	opportunity increased	opportunity slightly increased	opportunity slightly increased
d. Provide Forage for Domestic Livestock	plan is neutral	plan is neutral	opportunity slightly increased
e. Provide Timber Supplies	opportunity decreased	opportunity decreased	opportunity in- creased
<u>State Goals</u>			
a. Preserve States Agricultural Lands	opportunity increased	opportunity slightly increased	opportunity de- creased
b. Wildlife for Public Benefit and Enjoyment	opportunity increased	opportunity slightly increased	plan is neutral
c. Preserve Beauty of the State	opportunity increased	plan is neutral	plan is neutral

C. Physical and Technical Capability: Each alternative plan can be implemented without constraint of physical and technical factors.

D. Environmental Suitability: The environment of the river corridor is suitable for the application of each alternative plan. Of the reverse, Alternative I best protects the environment in its existing condition while Alternative II would allow a small degree of environmental degradation through the management activities and private land uses allowed under recreational classification. No designation would not assure that other resource uses and developments would adversely affect the natural beauty of the river corridor.

IDENTIFICATION OF PREFERRED ALTERNATIVE

VII



1



2



3

- 1) Headgate and water diversion ditch on Lower Piedra.
- 2) Access road in the East Fork Valley.
- 3) Summer homes in visual corridor.

VII. SELECTION OF PREFERRED ALTERNATIVE

The Forest Service preferred alternative plan is Plan I, recommending designation of the river with all segments being classified at the most restrictive level for which they are eligible. The selected alternative for the River Study recommendation is based on a joint decision of the Forest Service and Colorado Department of Natural Resources.

Alternative I was selected for the following reasons:

- The plan best meets Congressional intent of preserving eligible streams in their free flowing condition and protecting their immediate environments for the use and enjoyment of present and future generations.
- The plan provides a higher level of opportunity in meeting the environmental quality goals of the State of Colorado.
- By prohibiting the construction of new roads in the wild segments, the plan provides the greatest opportunity (in comparison to the other two plans) for the goal of protecting big game from harassment in key winter range within the unit and along their migration routes.
- Although the plan has a slightly negative output for timber, it is believed that this minimal cost to the economy is greatly outweighed by the environmental benefits that will accrue in meeting the environmental quality objectives.

Plan II (Not Selected)

Plan II, recommending classification of the Piedra River at the least restrictive level of recreational, was not selected because:

- Plan II does not insure full environmental protection for maintaining the current wild and scenic character. Management practices under recreational classification could erode the existing character.
- Plan II, at approximately the same administrative cost, provides less opportunity for goal attainment than does Plan I.

No Designation (Not Selected)

Maintaining the river and its environmental values through existing law and regulation is not recommended. The no designation plan was rejected for the following reasons;

- The plan does not assure that the Congressional intent of preserving eligible streams in their free flowing condition and protecting their immediate environments will be met.
- The plan does not increase or enhance opportunity for meeting State goals.
- The plan is neutral or detracts from the Federal goals in protecting the river corridor and providing for increased recreation use.
- Although this plan provides more for local and national economic development, the economic considerations do not outweigh the environmental attributes that will be lost if the current trend in land use and resource development continues. Losses to economic development are, in part, offset by gains in the recreation sector of the economy.

A. CONCLUSIONS

The Piedra River and its East and Middle Forks, upstream from Colorado Highway 160 to its headwaters along the Continental Divide is eligible (with two minor exceptions) and should be included in the National Wild and Scenic Rivers System. The exceptions are:

- 1) The two mile segment of the East Fork from Pagosa Creek upstream to the Piedra Falls Ditch diversion dam is de-watered during the recreation season, but would be eligible if water were restored to the stream bed during the summer months.
- 2) A short (approximately one-quarter mile) segment at the top of the East Fork from some unnamed ponds up to the State of Colorado's diversion ditches is de-watered, but would be eligible if water were restored to the stream bed during the summer months.

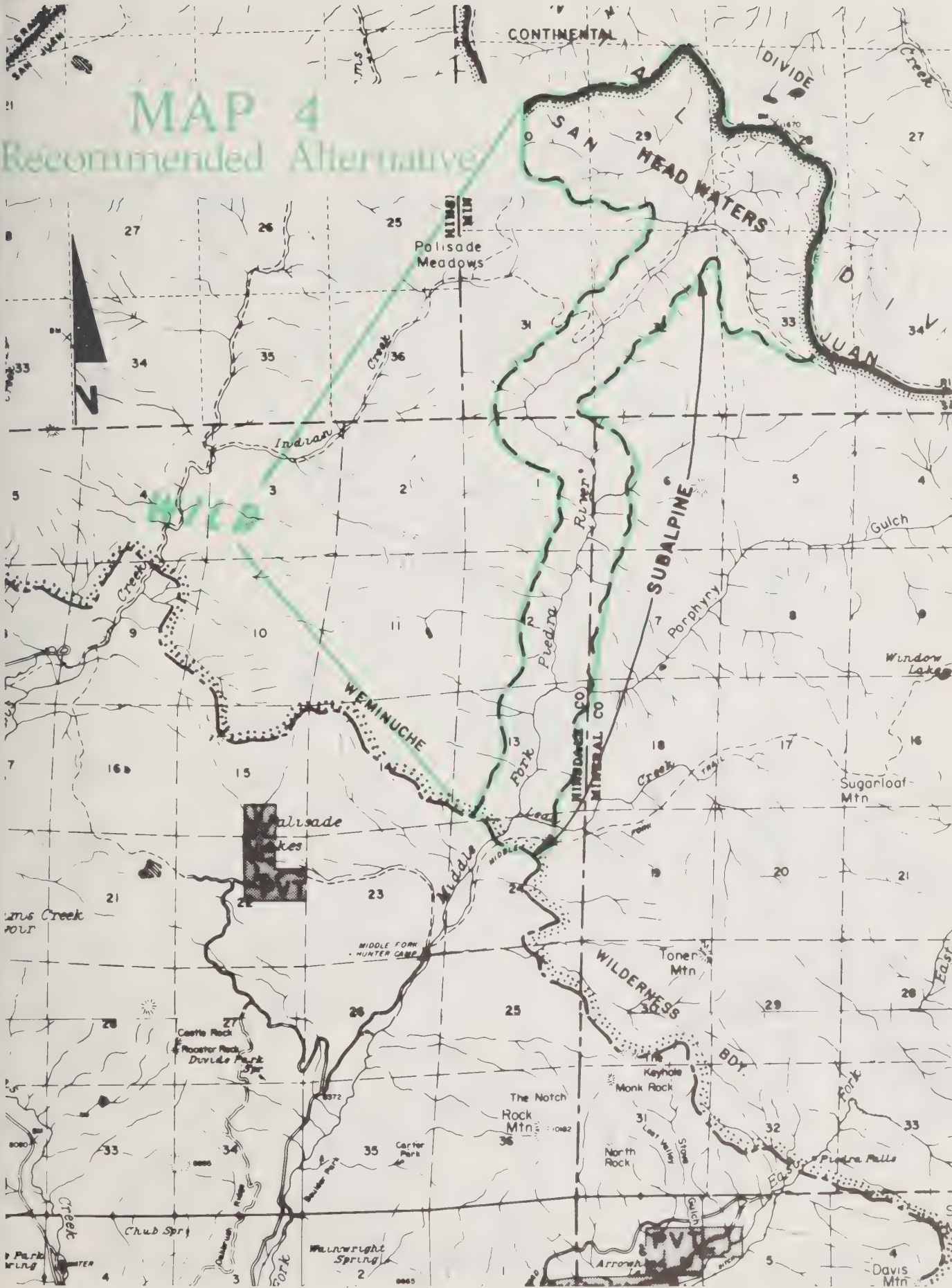
B. CLASSIFICATION RECOMMENDATIONS

In accordance with Public Law 90-542 as amended by Public Law 93-621 and the guidelines issued by the Secretaries of Agriculture and Interior, the 50.9 miles of river is proposed for classification as follows:

- 1) Lower Piedra--Colorado Highway 160 to Indian Creek
(About 5.5 miles) Recreational
- 2) Piedra Canyons--Indian Creek to Forest Development Road 631
(About 14.7 miles) Wild
- 3) Piedra Middle--FDR 631 to the confluence of the Forks, thence upstream
to the Weminuche Wilderness boundary on both the Middle Fork and the
East Fork
(About 12.9 miles Scenic
- 4) Middle Fork--Weminuche Wilderness boundary up to and including the
seven unnamed drainages along the Continental Divide that comprise
the headwaters
(About 9.3 miles) Wild
- 5) East Fork--Weminuche Wilderness boundary up to the unnamed ponds
approximately one-quarter mile below the Continental Divide
(About 8.5 miles) Wild

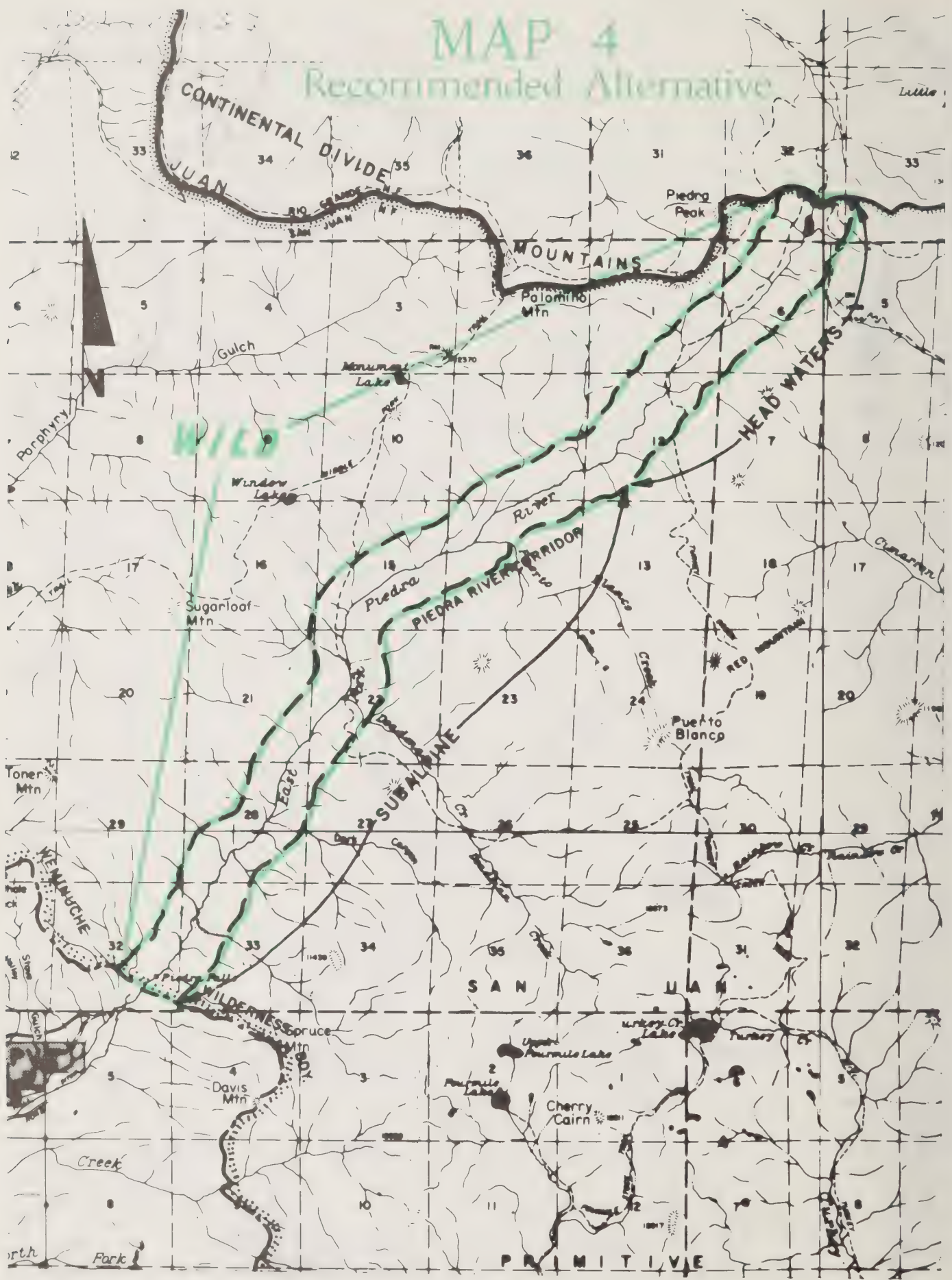
MAP 4

Recommended Alternative



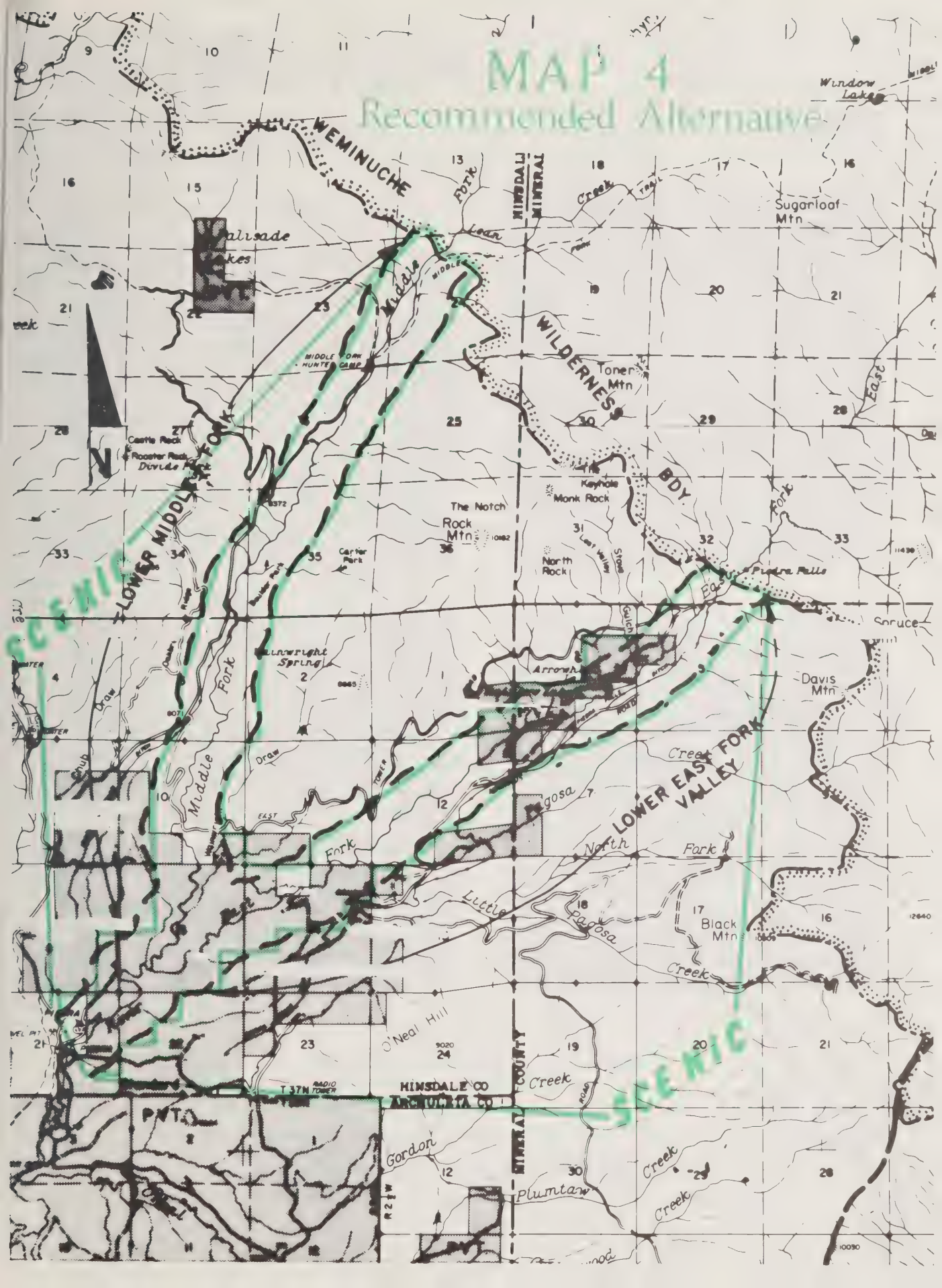
MAP 4

Recommended Alternative



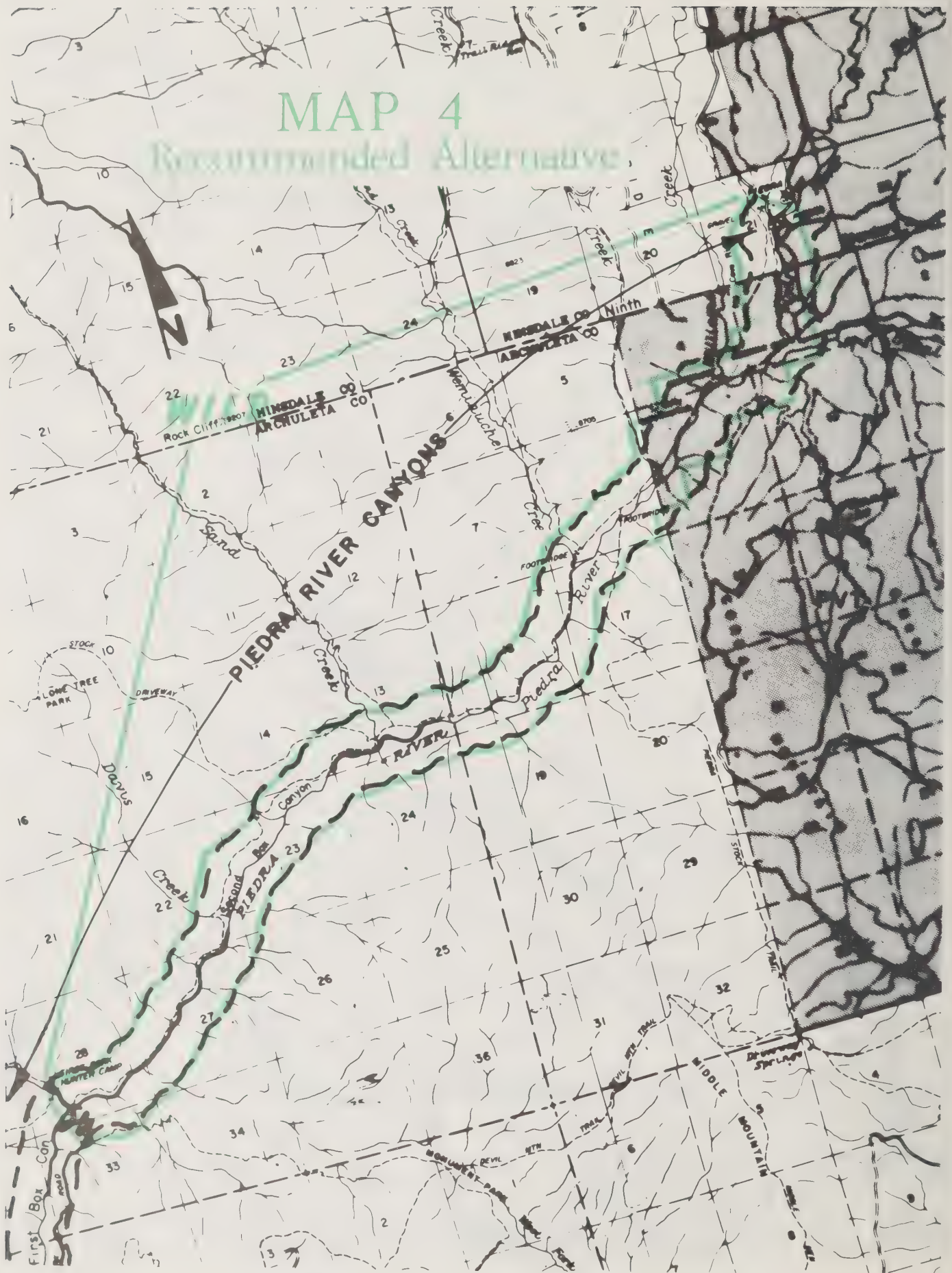
MAP 4

Recommended Alternative



MAP 4

Recommended Alternative



CONSULTATION WITH OTHERS

VIII



1



2



3



4

- 1) Toner barn on private land near the East and Middle Forks confluence.
- 2) Old ditch line used as trail near the East Fork.
- 3) Fence separating private lands from National Forest land.
- 4) Meadow along the Piedra mainstem near the upper bridge.

VIII. CONSULTATION WITH OTHERS

Individuals, organizations and other governmental agencies were encouraged to contribute information, concerns and ideas throughout the study. Public involvement gave the study team the feelings, values, opinions and needs of many persons and organizations with widely differing viewpoints.

A. PUBLIC INVOLVEMENT ACTIVITIES

Formal Public Involvement Activities. Public meetings were conducted twice during the study. Meeting locations, dates and registered attendance is listed below:

Information and Data Assembly: The objectives and study process were explained and immediate questions were received from the participants. The public was asked to express their ideas and concerns regarding the study, the river environment, the supplementary criteria, and resource uses.

Information Meetings:

<u>Location</u>	<u>Date</u>	<u>Registered Attendance</u>
Pagosa Springs	July 7, 1976	106
Durango	July 8, 1976	41
Denver	July 9, 1976	19

Formulate and Analyze Alternatives: Five generalized alternatives were proposed by the study team. Participants at the workshops were asked to review and critique the alternatives and formulate new alternatives that the team may have overlooked.

Alternatives Workshops:

<u>Location</u>	<u>Date</u>	<u>Registered Attendance</u>
Pagosa Springs	January 11, 1977	50
Durango	January 12, 1977	24
Denver	January 14, 1977	18

Field Workshop--River Eligibility and Suitability: An auto tour of the Piedra River area was made, providing an opportunity for on-the-ground review of the study team findings for various segments of the river. Participants were also asked to submit their own evaluations using the same criteria as the study team. During the entire field study the public was invited to accompany the study team on field trips (the field trip schedule was published in advance). Although participants were required to provide their own transportation and personal needs, 31 persons found time to go on one or more trips.

Informal Activities.

Use of Mass Media: The public was advised of all study activities through radio, television and newspapers throughout Colorado and northwestern New Mexico. Eleven scheduled new releases were made to inform the public of various meetings and workshops, keeping them abreast of the study progress.

Mass Mailings: The study team maintained a supplementary mailing list to complement the mass media new releases. Initial announcement of the study was sent to 2,440 individuals and another 400 were distributed through Federal and State offices. The mailing list stabilized at about 450 individuals, organizations and businesses.

Written Information Handouts: Public information and involvement activities were aided through distribution of written information. This effort focused on five documents distributed at meetings or mailed by special request:

<u>Document</u>	<u>Approximate Number Distributed</u>
Wild and Scenic Rivers, USDI-BOR and USDA-FS, 1975 (GPO 0-576-243)	160
Public Law 93-621	200+
Federal Guidelines USDI-USDA (GPO 864-100)	250+

<u>Document</u>	<u>Approximate Number Distributed</u>
Worksheet on Supplemental Guidelines for Tributaries and Headwaters in the Piedra Wild and Scenic River Study	600+
Piedra River Resource Information Sheet, Study Team, May, 1976	2,600+
Piedra River Alternative Information Sheet, Study Team, December, 1976	800+

State and Local Government: Prior to initiating the study, the leader met with the Commissioners of Archuleta, Hinsdale and Mineral Counties, Colorado, at their regular meetings to explain the river study.

Notification of the study was given to the Colorado State Clearing House in May, 1976. The Colorado Department of Natural Resources was named as the lead state agency for the State review process.

B. PUBLIC RESPONSE

Contributions to the study effort include the following.

Federal Agencies

USDI-Bureau of Reclamation: Provided the written reports for the proposed O'Neal project and a statement that the Piedra River was not being considered in any of their current inventory or planning activities.

USDI-Heritage Conservation and Recreation Service (formally Bureau of Outdoor Recreation): Acted as member of study team and provided liaison with the U.S. Department of Interior.

USDA-Farmers Home Administration: Provided appraisal data for the value of local crop land, livestock and field crops.

USDA-Soil Conservation Service: Provided data for local irrigation situations and efficiencies.

State Agencies

Department of Local Affairs, Colorado Division of Planning: This agency acted to coordinate State review of the various study documents and forward State comments to the study team.

Colorado Department of Health: Indicated they preferred the selected alternative, but stressed that regardless of the final selection, water quality standards must be met.

Colorado Division of Water Resources: Provided the data for adjudicated water rights on the Piedra River.

Colorado Division of Wildlife: Provided all wildlife and fisheries data.

The State Historical Society of Colorado: Provided the material for the history of the region and identified the historic register properties for both the National Register and the Colorado Inventory of Historic Sites.

Colorado Department of Highways: Were concerned with the impact that Wild and Scenic Rivers designation for the Piedra River would have on the facilities of Colorado's southwestern transportation system.

Office of the State Archaeologist: Made an evaluation of the archaeological values and emphasized that although known existing sites are few in number the area may have great potential because of its location near the Chimney Rock occupation.

Southwestern District Water Commissioner For Colorado: Provided water rights and water user data.

County and Local

Archuleta, Board of County Commissioners
Hinsdale, Board of County Commissioners
Mineral, Board of County Commissioners
School District No. 50-JT
Upper San Juan Planning Commission

The main thrust of County and local government concerns was the potential impact on the area's economy.

Southern Ute Tribal Council: Protection of wildlife habitat is of utmost concern because of its economic impact to the Southern Ute Indians. Their concern is fostered by the amount of key winter range being converted to subdivisions and housing developments that close migration routes. They believed that designation of the river would have a positive impact on the recreation sector of the economy and that the Forest Service should not develop recreation sites in competition with those on private lands.

Business, Groups and Individuals.

Comments, both substantive or minor, from all sectors of the public were strongly polarized between the desire for environmental protection or development of the Piedra River and its corridor. The expressed concerns were first used to identify issues, then to formulate alternatives and aid in testing the initial alternatives.

Individual concerns expressed by groups and individuals are too numerous to list. However, most public comment fell into one or more of the broad categories that follow:

- concern for the continuation of grazing livestock
- concern for and against timber harvest
- the need for increasing fishing opportunity
- concern for and against mineral, gas and oil and gravel development
- concern for and against water resource developments
- concern for control and administration of recreation use
- concern for or against roads crossing or following the river
- concern for or against use of motorized trail vehicles and other off road vehicles
- concern for protecting or increasing wildlife habitat and populations
- concern for better control of the wilderness user
- the need for public education
- concern for problems of litter, vandalism and overuse of the involved private land areas
- concern for the taking of the rights of private landowners, with or without compensation
- concern that no reasonable need exists for public access on private lands since public ownership exists on most of the river at present
- concern that wild and scenic river designation will cause undue economic hardships on businesses and individuals located in the local area

All public comments were summarized on coded punch cards and are kept on file at the Supervisors Office, San Juan National Forest.

Individual contributions to the study effort prior to the Draft Environmental Impact Statement were received from:

Business and Industry

At Last Ranch
Citizens Bank, Pagosa Springs
Cugnini Land and Cattle Company
Durango Herald
Four Corners Environmental Research Institute
Nickles Brothers Incorporated
Notch Guest Ranch
Pagosa Sun
Palisade Lakes Resort
Piedra Valley Ranch Company
Tres Piedras Ranch Company
San Juan Lumber Company

Groups

Colorado Association of Snowmobile Clubs
Colorado Open Space Council
Ft. Collins-Poudre Snowmobile Club
International Snowmobile Industry Association
Pagosa Springs Highcountry Outfitters
Piedra Grange #461
Piedra River Citizens Committee
San Juan Ecological Society
The Wilderness Society
United Sports Council of Colorado
University of Colorado Wilderness Study Group
Utah Snowmobile Association
Western River Guides Association

Wilderness Resources Institute
Wyoming Snowmobile Association

Individuals

Mr. and Mrs. John Baird	Colorado
Mr. Louis Beecherl	Texas
Mr. Rodney Blacker	Colorado
Mr. and Mrs. Chas. Blondell	Colorado
Mr. and Mrs. Harkey Boling	New Mexico
Mr. Roy Brown	Colorado
Mr. Bob Browning	New Mexico
Mr. Gordon Bruchner	Colorado
Mrs. Lillie Carlin	Colorado
Mr. West Carlin	Colorado
Mrs. Mary Carpenter	Colorado
Mr. Roy Craig	Colorado
Mr. R. C. Connelly	Colorado
Mr. Leonard Davis	Texas
Mr. Ed Del Duca	Colorado
Mr. Robert DeNier	Colorado
Mr. James Eddy	Colorado
Mr. Glen Edmonds	Colorado
Mr. John Elder	New Mexico
Mr. Charles Eppinger	Colorado
Mr. John Faber	Colorado
Mr. Wayne Farrow	Colorado
Mr. Donald Fink	New Mexico
Mr. Milt Fuller	Colorado
Dr. Charles Gaylord	Colorado
Mr. Henry Glascock	New Mexico
Ms. Janet Goodnoe	Colorado
Mr. Richard Hackstaff	Colorado
Ms. Vicki Hayes	Colorado
Mr. Dave Hartong	Colorado
Mrs. J. W. Hershey	Colorado
Mr. Bert Hinkly	New Hampshire
Mr. Will Hobbs	Colorado
Mr. and Mrs. S. W. Homestake	Colorado
Mr. Wayne Johnson	Iowa
Mr. Bob Kleckner	Colorado
Mr. Robert Lindner	Ohio
Mr. Frank Ludwig, Jr.	Colorado
Mr. Joe Madrid	Colorado
Mr. Wm. Mallory	Colorado
Mr. Stephen Merritt	Colorado
Mr. H. E. Minor	Colorado
Mr. Joseph Moore	Colorado
Mr. J. F. Morgan	Colorado
Mr. James Morton	Colorado
Mr. Doug Murphy	New Mexico
Mr. and Mrs. Ray Murry	Colorado
Mr. Jim O'Brian	Colorado
Ms. Bonnie Orkow	Colorado
Mr. Harry Patterson	Arizona
Mr. Charles Petit	Colorado
Mrs. Philip Petricone	Colorado
Mr. Vic Poma	Colorado
Mr. Vandy Powell	Colorado
Mr. Carl Raish	Colorado
Mrs. Connie Robinson	Colorado
Mr. and Mrs. John Rogers	Texas
Mr. R. F. Rood	Oklahoma
Mr. John Roslek	Colorado
Mr. Ray Sage	Colorado
Mr. Bud Seavey	Colorado
Mrs. Janette Shetter	Indiana
Dr. Albert Spencer	Colorado
Mr. Guy Tomberlin	Colorado
Mr. and Mrs. Archie Toner	Colorado
Mr. Travis Ward	Colorado
Mrs. Jean Warren	Colorado
Mr. Lonnie Welch	Colorado
Mr. Robert Willard	Colorado
Mrs. Joseph Wilson	Colorado

C. DISTRIBUTION OF DRAFT ENVIRONMENTAL IMPACT STATEMENT

On March 14, 1979, the Draft Environmental Impact Statement and Study Report was transmitted to the Environmental Protection Agency and its availability to the public was announced by various news media outlets. Approximately 70 copies were sent to the various Federal Government Departments, asking for their review and comment in accordance with Section 4(b) of the Wild and Scenic Rivers Act (82 Stat. 906). Another 400 copies were sent to State Agencies (A95 Clearing-house Procedures), County and local governments, legislators, organizations, businesses, and individuals.

D. RESPONDENTS TO DRAFT ENVIRONMENTAL IMPACT STATEMENT

The following submitted written responses to the Draft Environmental Impact Statement:

Federal Agencies

Department of Agriculture (Soil Conservation Service)
Department of the Army
Department of Commerce
Department of Housing and Urban Developments
Department of Transportation
Environmental Protection Agency
Federal Energy Regulatory Agency

State Agencies - State of Colorado

Honorable Richard D. Lamm - Governor
Colorado Historical Society
Department of Health
Department of Highways
Department of Local Affairs
Department of Natural Resources
 Division of Parks and Outdoor Recreation
 Division of Water Resources
 Division of Wildlife
Office of Energy Conservation

Local Agencies

Upper San Juan Regional Planning Commission

Businesses and Organizations

Colorado White Water Association
Fremont Ecology
Front Range Fly Fishers
Indian Peaks Group of the Sierra Club
United Sportsman's Council of Colorado
University of Colorado Wilderness Study Group
Sierra Club Rocky Mountain Chapter
The Colorado Mountain Club
Wildlife Management Institute

Individuals

Armitage, Alexandra	Colo.	Merritt, Clifton R.	Colo.
Beecherl, Louis A.	Tex.	Mounsey, William Bird	Colo.
Bevans, Dave	Colo.	Numark, Neil J.	Colo.
Coules, Dennis	Calif.	O'Brien, J. S.	Colo.
Feazel, Elizabeth T.	Colo.	Orkow, Bonnie M.	Colo.
Grabert, Brian E., M.D.	Colo.	Patterson, Harry A.	Ariz.
Grace, Lynn	Colo.	Ruth, Bobbie L.	Colo.
Gumaer, Dorthy	Colo.	Rodda, Gordon	Fla.
Hammond, John L.	Colo.	Spencer, Donald R.	Colo.
Hershey, Mrs. J. W.	Colo.	Steele, Virginia E.	Colo.
Hill, John H.	Tex.	Thompson, Ron	Colo.
Horning, Thomas	Colo.	Van Gytenbeek, R. P.	Colo.
Likens, D. L.	Fla.	Vander Zauden, Karla	Colo.
Marks, Pamela	Colo.	Willard, Robert W.	Colo.
McKown, Ruth S.	Colo.	Zachary, Steve	Colo.

E. COPIES OF LETTERS RECEIVED IN RESPONSE TO DEIS AND FOREST SERVICE COMMENTS

A copy of each letter received is contained in this section. We have taken the liberty of inserting our comments to respondent's concerns or questions within the bodies of their letters to aid in reading. Our comments are typed in italics (script) and indented. Where respondents' comments have resulted in a change, correction, or updating of text, (Includes changing the scale of two maps) it is so noted. Because of some changes in the text, the page number referred to in some of the letters may no longer apply, so in our comments we attempt to direct the reader to the applicable sections of the document.

State agencies responding to the DEIS did so through the Colorado Clearinghouse (A95 procedures). Each State Agency letter is addressed to the Colorado Clearinghouse and then was forwarded to the Forest Supervisor, San Juan National Forest.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII
1860 LINCOLN STREET
DENVER, COLORADO 80203

APR 18 1979

Ref: 8W-EE

Mr. P. C. Sweetland
Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, CO 81301

Dear Mr. Sweetland:

The Region VIII Office of the Environmental Protection Agency has reviewed the draft environmental statement (EIS) for the Piedra Wild and Scenic River Study for the San Juan National Forest. Our office fully supports the recommendations of the U.S. Forest Service and the Colorado Department of Natural Resources that Plan I is the preferred alternative. We believe that the designation of all eligible segments of the Piedra River at the most restrictive classification level for which each segment is suitable, will best protect the area's high water quality.

According to the procedures EPA has adopted to rate the adequacy of draft environmental impact statements, the draft EIS for the Piedra Wild and Scenic River Study will be rated as LO-1. This means we have no objections to the preferred alternative as described in the draft EIS and that the draft EIS adequately sets forth the environmental impact of the preferred alternative as well as other reasonably available alternatives.

We appreciate the opportunity to review this draft EIS and request that you provide us with five copies of the final EIS for our review. If you have any questions, please contact Dennis Sohocki of my staff at 837-4831.

Sincerely yours,

Alan Merson
Regional Administrator



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

REGION EIGHT
BUILDING 40, DENVER FEDERAL CENTER
DENVER, COLORADO 80225

June 22, 1979

IN REPLY REFER TO:

HED-08

Reference: Your 1950/2510
letter of March 14, 1979

Mr. P. C. Sweetland
Forest Supervisor
San Juan National Forest, USDA
701 Camino Del Rio
Durango, Colorado 81301

Dear Mr. Sweetland:

Thank you for the opportunity to review the draft Environmental Impact Statement for the Piedra Wild and Scenic River Study for the San Juan National Forest.

It appears that transportation considerations in this area are minimal and have been adequately addressed. We, therefore, have no substantive comments to offer in this regard.

Sincerely yours,

Daniel Watt
Regional Federal Highway Administrator



THE SECRETARY OF COMMERCE
Washington, D.C. 20230

MAR 28 1979

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79 APR 10 A 8:06
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Dear Bob,

Thank you for your letter of March 12, 1979, enclosing the Forest Service draft environmental impact statement (DEIS) "Piedra River - Wild and Scenic River Study."

The DEIS has been referred to Dr. Sidney R. Galler, Deputy Assistant Secretary for Environmental Affairs. Any comments developed within the Department of Commerce will be transmitted by Dr. Galler directly to Mr. John R. McGuire, Chief of the Forest Service, within the 90-day review period.

We appreciate the opportunity to review this document.

With my good wishes,

Sincerely,

Robert Bergland

Honorable Bob Bergland
Secretary of Agriculture
Washington, D.C. 20250



UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Science and Technology
Washington, D.C. 20230
(202) 377-3000 4335

May 1, 1979

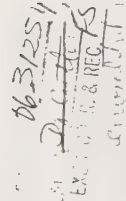
Mr. John R. McGuire
Chief, Forest Service
USDA, South Building
12th and Independence Avenue, SW
Washington, DC 20250

Dear Mr. McGuire:

The Draft Environmental Impact Statement for the Piedra River, San Juan National Forest, Durango, Colorado, which accompanied your letter of March 12, 1979, has been reviewed in the Department of Commerce. We have no comment to offer in this instance.

Sincerely,

Sidney R. Galler
Sidney R. Galler
Deputy Assistant Secretary
for Environmental Affairs



79 APR 10 A 9:07

April 4, 1979

Honorable Robert S. Bergland
Secretary of Agriculture
Washington, D. C. 20250

Dear Mr. ~~Secretary~~:

Your letter of March 12, 1979 requesting review and comment on the proposed report-environmental statement on the Piedra River in Colorado, in accordance with the provisions of the Wild and Scenic Rivers Act, has been referred to our Denver Regional Office for response.

The Regional Administrator is cognizant of the river study area and the Department's programs relating thereto. If there are substantial concerns in reference to the Department's programs in the area or the findings and recommendations of the study report, you will be advised by the Regional Administrator, Ms. Betty Miller. She will, therefore, provide the Department's views which are to accompany the report to the President.

We appreciate the opportunity to review and comment on the report.

~~Sincerely~~ yours,

Patricia Roberts Harris



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
REGIONAL/AREA OFFICE
EXECUTIVE TOWER - 1405 CURTIS STREET
DENVER, COLORADO 80202

REGION VIII

April 16, 1979

850Q
IN REPLY REFER TO:

Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, Colorado 81301

Dear Sir:

Thank you for the opportunity to review and comment on the draft Environmental Impact Statement (EIS) and Wild and Scenic River Study, Piedra River.

Your draft EIS and Study has been reviewed with specific consideration for the areas of responsibility assigned the Department of Housing and Urban Development (HUD) for review of other agencies' EIS's. These areas focus on a proposal's compatibility with local and regional comprehensive planning and impacts on urbanized areas. Within this context, we feel that the document is adequate.

If you have any questions regarding these comments, please contact Mr. Walter Kelm, Regional Environmental Clearance Officer, at (303) 837-3102.

Sincerely,

Raymond D. McKinney
Raymond D. McKinney
Director
Program Planning and Evaluation



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY FOR CIVIL WORKS & REG.
WASHINGTON, D.C. 20310

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MAY 24 1979

Honorable Bob Bergland
Secretary of Agriculture
Washington, D. C. 20250

Dear Mr. Secretary:

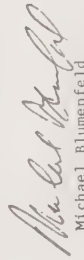
I am responding to your request of 12 March 1979 for comments on your proposed report and Draft Environmental Statement on the Piedra River wild and scenic river study.

The report and draft environmental statement include a recommendation to classify portions of the Piedra River and its East and Middle Forks under the Wild and Scenic Rivers Act as amended by Public Law 93-621, as follows: a 32.5-mile portion of the Piedra River system would be designated as a wild river, 12.5 miles as a scenic river, and 5.5 miles as a recreational river component. No projects or anticipated water resource developments of the Department of the Army are in the area which would be affected by the proposed designations.

We have reviewed the draft environmental statement and have concluded that the statement adequately covers environmental concerns related to our responsibilities; i.e., regulatory functions pursuant to Section 10 of the River and Harbor Act of 1899 and Section 404 of the Clean Water Act (33 USC 1344), and planning for water resources development.

I appreciate this opportunity to comment on the report and draft environmental statement.

Sincerely,



Michael Blumenfeld
Assistant Secretary of the Army
(Civil Works)

FERC
Page 1 of 2

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

In Reply Refer To:

OEPR-DRB
Cooperative Studies
Draft Environmental Statement
and Wild and Scenic River
Study - Piedra River

JUN 25 1979

Mr. Paul C. Sweetland
Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, Colorado 81301

Dear Mr. Sweetwater:

This is in response to your letter of May 30, 1979, requesting our review and comments on the environmental impact statement and Wild and Scenic River Study for the Piedra River, Colorado, pursuant to the provisions of the Wild and Scenic Rivers Act (P.L. 90-542).

The recommended action described in your Department's study document is to amend the Wild and Scenic Rivers Act (P.L. 90-542, as amended) to include segments of the Piedra River and its East and Middle Forks, located in Hinsdale, Mineral, and Archuleta Counties, Colorado, in the National Wild and Scenic Rivers System. A 32.5 mile portion of the Piedra River System is proposed for inclusion in the National System as a wild river, a 12.5 mile portion as a scenic river, and a 5.5 mile portion as a recreational river component.

The Federal Energy Regulatory Commission staff has reviewed the above-referenced study document to determine the possible effects of the proposed action on matters pertaining to the Commission's responsibilities. Such responsibilities relate primarily to the development of hydroelectric power under the Federal Power Act, and the construction and operation of natural gas pipelines under the Natural Gas Act.


Staff review indicates that there are no existing electric generating plants in any of the river corridors considered for inclusion in the National Wild and Scenic Rivers System. As mentioned in the study document, there is a potential hydroelectric site identified in the First Fork of the Piedra River with the capacity for generating approximately 40,000,000 kilowatt-hours annually. However, there are no known plans currently under consideration for development of this site.

Mr. Paul C. Sweetland

With regard to natural gas pipelines, information available to this office indicates that there are none within the 16,300-acre wild and scenic river study area of Mineral, Hinsdale, and Archuleta Counties, Colorado. Further, as of August 1978, there was no oil or gas exploration, development, or production within the river study corridor.

Based on consideration of the draft report and draft environmental statement prepared by your Department, and review by our staff, it appears that, although hydroelectric power potential exists within the recommended scenic river segment of the First Fork of the Piedra River, the development of this potential hydroelectric power is not likely. Therefore, we offer no objection to the proposed inclusion of the above-mentioned segments of the Piedra River and its East and Middle Forks in the National Wild and Scenic Rivers System.

Sincerely,


William W. Lindsay, Director
Office of Electric Power Regulation



United States
Department of
Agriculture

Soil
Conservation
Service

P.O. Box 2890
Washington, D.C.
20013

Soil Conservation Service
Page 1 of 2

SUBJECT: INTERA - Wild and Scenic River Studies - DATE: MAR 29 1979
Piedra River, Colorado


TO: Charles R. Hartgraves, Director, Land Management Planning
Forest Service

This is in response to your memorandum of February 28, 1979, requesting our review and comments on the Piedra River Wild and Scenic Rivers Report and Environmental Impact Statement.

Decreased waters are discussed on page 2-19 and tabulated in Table C-VI. However, there is no mention of the status of these diversions under the proposed Wild and Scenic River designation. If they will not be affected by the designation, the report should make a positive statement to this effect.

One comment is enclosed for consideration in your application of the Water Resources Council's Principles and Standards.

We are pleased to see the analysis of the economic loss from reduced agriculture and forestry activities that would be expected to result from the alternative plans.


SHELDON G. BOONE
Director
River Basins Division

Enclosure

cc:

Robert G. Halstead, State Conservationist, SCS, Denver, Colorado
Kenneth L. Williams, Director, WISC, SCS, Portland, Oregon
Philip L. Archibald, Director, Area Planning and Development, Forest Service, Washington, D.C.

Soil Conservation Service
Comment on
Piedra River, Colorado

Page 1-20 states that "Agricultural production on private lands was not considered because the Forest Service does not have authority to enter into programs that would increase productivity on private lands." The Forest Service authorities are really not the issue at this point in the planning process. The intention is

to further specify the NED components, including production of agricultural products, that are identified in the supply demand analysis on page 1-19. The intention of the Principles and Standards is to develop a National Economic Development Alternative which reflects the real economic potential of the study area, regardless of agency authority.



Principles and Standards (Chapter V, Section A, page 14) comments that, "The components selected for use in formulating alternative plans should be of concern to the Nation, and the components should be those that can reasonably be expected to be substantially influenced through the management and development alternatives available to the planner." We can find nothing in our analysis that would increase or decrease crop production on private lands as a result of some action under the auspices of wild and scenic river classification. This is why production on agricultural crops identified in the first level component specifications (page 1-19) was dropped in the second level. The first paragraph of the second level specification (page 1-20) has been rewritten to clarify this point.

Upper San Juan Regional Planning Commission

ARCHULETA COUNTY COURTHOUSE
PAGOSA SPRINGS, COLORADO 81347
(303) 284-5851

June 26, 1979

Paul Sweetland
Forest Supervisor
San Juan National Forest
701 Camino del Rio
Durango, Colorado 81301

Dear Mr. Sweetland:

The Upper San Juan Regional Planning Commission has reviewed the Draft Environmental Statement and Wild and Scenic River Study for the Piedra River. We find your information and analyses thorough and complete and commend the degree to which the report is attuned to the special characteristics of the local area.

We agree that designation of the Piedra as a Wild River is justified on Forest Service lands but must protest any designation at all of the river segments flowing through private lands. This includes the 5.5 miles of the "Lower Piedra" recommended for Recreational designation and the 12.9 miles of the "Piedra Middle" recommended for Scenic designation. Although development controls may be needed along the river on private lands, we believe that such restrictions are the prerogative of, and should be generated by, local government and not mandated from Washington, D.C.

We thank you for the opportunity to review and respond on this important issue.

Very truly yours,

Fred A. Ebeling
Planning Administrator

COMMISSION MEMBERS
H. Ray Maehl
Paul Decker
Richard Crockett
Russell Cronley
Arnold Larson
L. A. Lusk
Rudolf Marquez
Ted La May
Archie Tower
Paul A. Ebeling
Planning Administrator



State of Colorado

EXECUTIVE CHAMBERS
136 State Capitol
Denver
80203

RICHARD D. LAMM
Governor

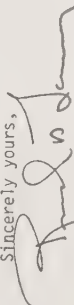
July 23, 1979

R. Max Peterson, Chief
U. S. Forest Service
South Building
12th and Independence Ave., S. W.
Washington, D. C. 20250

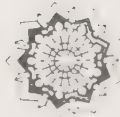
Dear Mr. Peterson:

We have reviewed the Piedra Wild and Scenic River Report and Draft Environmental Statement. It is noted that the documents were prepared in cooperation with the Colorado Department of Natural Resources. The conclusions and recommendations have our full support.

Sincerely yours,


Richard D. Lamm
Governor

cc: Mr. Craig W. Rupp
Regional Forester
U. S. Forest Service
P. O. Box 25127
Lakewood, Colorado 80225



**Department of Local Affairs
Colorado Division of Planning**

Philip H. Schenck, Director



Richard D. Lamm, Governor

June 8, 1979

899-2471

Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, Colorado 81301

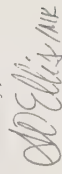
SUBJECT: Draft Environmental Impact Statement
Piedra Wild and Scenic River Study

Dear Sir:

The Colorado Clearinghouse has received the above-referenced Environmental Impact Statement and has distributed it to interested state agencies. Comments received from the Division of Water Resources, Division of Wildlife, Division of Parks and Outdoor Recreation, State Historic Preservation Officer, Office of Energy Conservation, Department of Highways and the Department of Health are enclosed for your information.

Thank you for the opportunity to review this matter.

Sincerely,


Stephen O. Ellis
Chief Planner

SE/NK/vt
Enclosures

cc: Office of the Governor
Department of Natural Resources
Colorado Historic Society
Office of Energy Conservation
Department of Highways
Department of Health
San Luis Valley Council of Governments
San Juan Regional Commission
District 10 Regional Planning Commission



Letters on the following pages are from the State agencies.
Each is answered individually.



COLORADO DEPARTMENT OF HEALTH

4210 EAST 11TH AVENUE • DENVER, COLORADO 80220 • PHONE 320-8333
Frank Traylor, M.D., Executive Director

APR 19 1979

DIV. OF PLANNING

STATE DEPARTMENT OF HIGHWAYS

JACK KINSTLINGER

EXECUTIVE DIRECTOR

DIVISION OF HIGHWAYS
E. N. HAASE
CHIEF ENGINEER

COLORADO STATE PATROL
COL. C. WAYNE KEITH,
CHIEF

STATE OF COLORADO

4201 EAST ARKANSAS AVENUE • DENVER, COLORADO 80222 • (303) 757-9011

May 8, 1979

MAY 8 1979

DIV. OF PLANNING

DATE: April 18, 1979

SUBJECT: NON-STATE ASSISTANCE

REVIEW AND COMMENTS

TO: Mr. Stephen O. Ellis
Colorado Clearinghouse
Division of Planning

Mr. Philip H. Schmuck
Director
Colorado Division of Planning
520 State Centennial Building
1313 Sherman Street
Denver, Colorado 80203

Dear Mr. Schmuck:

The Colorado Department of Highways has completed its review of the Piedra River Draft Environmental Impact Statement and Wild and Scenic River Study and has the following comments.

PROJECT TITLE: Piedra River, Draft EIS and Wild and Scenic River Study
STATE IDENTIFIER: U.S. Forest Service, San Juan National Forest - #79-105

COMMENTS: Water Quality Control
The Water Quality Control Division supports the recommendation to designate the Piedra River as a wild and scenic river.

In general the document adequately addresses the impacts of this proposal on the transportation system. We would ask, however, that planning be coordinated to avoid placing restrictions on construction activities should US 160 require upgrading in the future.

Thank you for the opportunity to review this document.

Very truly yours,

Jack Kinstlinger
Executive Director

By *Harvey R. Atchison*
Harvey R. Atchison
Director

Division of Transportation Planning

Name, Title
Micki Barnes, Program Administrator

SOC-3, Jan 79

BSC/r8

If the Congress includes the river into the National, Wild and Scenic Rivers System, the agency responsible for administration and management of the river is to prepare a plan for necessary developments in connection with its administration in accordance with such classification. We anticipate and welcome your continued comment and involvement in the subsequent planning.



State of Colorado

OFFICE OF ENERGY CONSERVATION

DENVER

RICHARD D. LAMM
Governor

BUFE SEAWELL
Director

APR 17 1979
DIV. OF HIGHWAYS

TO: Colorado Clearinghouse
FROM: Colorado Office of Energy Conservation
DATE: April 13, 1979
RE: Piedra River-Draft Environmental Statement and Wild and Scenic River Study

This office commends the selection of alternative one over the other river classification alternatives, since it prohibits construction of new roads and is the most restrictive choice in terms of free travel by motor vehicles. In this regard, a major benefit is the restriction of loop-road construction and thereby elimination or reduction of recreational driving, which utilizes fuel, for purposes that can be fulfilled by other means.

A further beneficial effect of the chosen classification for the river - in which the largest segment, 32.5 miles of the river course, are designated as "wild"-is curtailment of residential and other development of land, with the corresponding impacts from energy use which would be brought by development.

Other management recommendations (Item C under Section VI, "conclusions and recommendations," PP. 2-34/2-37) to be commended are those provided that the boundaries be established according to the maximum permitted by law, up to 320 acres per mile, rather than according to visual corridor boundaries; and that motorized vehicle closures be implemented for the non-wilderness wild segments. In the latter case it is stated that trail bikes should be restricted on the Piedra River Trail; the OEC would prefer that trail bike use be prohibited entirely, for the following reason: the use of off-road vehicles for whatever recreational value there may be in simple driving around, rather than for purposes of reaching a particular destination, is, in our opinion, a wasteful use of fuel.

Your concern for motor bikes will be addressed in the management plan.



DIVISION OF WATER RESOURCES

Department of Natural Resources
1313 Sherman Street - Room 818
Denver, Colorado 80203
Administration (303) 839-3581
Ground Water (303) 839-3587

May 14, 1979

MAY 14 1979

DIV. OF HIGHWAYS

MEMORANDUM

TO: STEPHEN O. ELLIS, STATE CLEARINGHOUSE
FROM: HAL D. SIMPSON, CHIEF, WATER MANAGEMENT BRANCH
FOR: DR. JERIS A. DANIELSON, DEPUTY STATE ENGINEER
SUBJECT: PIEDRA RIVER - DRAFT ENVIRONMENTAL IMPACT STATEMENT AND WILD AND SCENIC RIVER STUDY

This is to acknowledge receipt of your request for review of the above referenced report. The findings of the study and the resultant recommendations as presented in the report should not injure any of the existing water right holders along the Piedra River. We, therefore, have no objections to the proposed river designations, as presented in the report, as long as the proposed management of this reach of the Piedra River will not prohibit the State of Colorado from enforcing all applicable state water statutes.

It should be noted that the amount of water decreed from the river in the study area, as discussed on page 2-19, is no longer correct. A new tabulation of water rights was made during the latter part of 1978 which lists new water rights in the study area. None of these additional water rights are in the reach of the river that is to be designated as a wild river. The water rights are located in the reaches of the river that are to be designated as scenic and recreational. As a result of the new printout, Table C-VI is no longer accurate with regards to Basin Rank, number of ditches or total decreed water rights. If the new decreed water rights information is required by the Forest Service for their report, they can contact us and we will furnish a list to them.

Hal D. Simpson
Hal D. Simpson

Your Durango Office was contacted to get the updated listing. The paragraph on page 2-19 and Appendix C are updated in accordance with your 1978 revised listings. We thank you for calling our attention to your new listings.



COLORADO
HISTORICAL
SOCIETY

APR 16 1979

DIV. OF Planning

The Colorado Heritage Center 1300 Broadway Denver, Colorado 80203

April 10, 1979

Mr. Stephen O. Ellis
Principal Planner
Department of Local Affairs
Colorado Division of Planning
520 Centennial Building
Denver, CO 80203

RE: Piedra River - Draft Environmental Statement and Wild and
Scenic River Study, U.S. Forest Service

Dear Mr. Ellis:

This office has received and reviewed the Piedra River Draft
Environmental Statement and Wild and Scenic River Study, USFS.

The following recommendations should be included in the Final
Environmental Statement for the Piedra Wild and Scenic River Study.

1. p. 2-4. A Regional overview of the Prehistory of the area
should be included in the section "History of Development." This
is especially important because of the close proximity of the Piedra
River to Chimney Rock, a National Register Archaeological District.

*We do not believe an overview of the prehistory of the area
will significantly affect the recommendation of this report.
Page 1-8 calls attention to the relationship of the river
corridor to the Anasazi Culture and Chimney Rock. Page 2-23
also notes that because of this geographical relationship the
expectations for additional cultural finds exist.*

2. p. 2-23. An archaeological survey is mentioned in this
Section. Who conducted this survey? The area surveyed should also
be defined.

STATE OF COLORADO
Richard D. Lamm, Governor
DEPARTMENT OF NATURAL RESOURCES
Harris D. Sherman, Executive Director

DIVISION OF PARKS AND OUTDOOR RECREATION
1313 SHERMAN 618, DENVER, CO. 80203



GEORGE T. O'MALLEY, JR., Director

PARKS AND OUTDOOR RECREATION BOARD
Sara D. Duncan, Chairman
Richard G. Beidleman, Vice-Chairman
Howard F. Alden, Secretary
Clarke Ballinger, Member
Phil Eggleston, Member

M E M O R A N D U M

TO: Stephen O. Ellis, Coordinator
Colorado Clearinghouse

FROM: Ralph Schell, Planner
Division of Parks and Outdoor Recreation

DATE: April 13, 1979

SUBJECT: Piedra River - Draft Environmental Statement and Wild and
Scenic River Study

The Division of Parks and Outdoor Recreation has reviewed the Draft
Environmental Statement and Wild and Scenic River Study for the
Piedra River and concurs with the U. S. Department of Agriculture
and the Colorado Department of Natural Resources in recommending
that the Piedra River be added to the National Wild and Scenic
River System with the preferred Alternative I designation.

RS/jb

APR 16 1979

U.S. FOREST SERVICE

The survey on mention was made by Huberts and Reed (1976). A formal survey report was not written. However, two sites were found. These were reported to your staff archaeologist by letter of January 3, 1977. Our site number was AR-02-13-07-26 to which your office assigned your number 5AA429. We did not intend to identify the specific site locations because of pot hunters and other souvenir collectors.

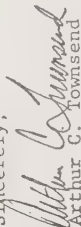
Other references (surveys) your Staff Archaeologist cited when she (Ann M. Johnson) provided the archeological data for the study was Applegerth, 1974, McFadden, 1976 and Ward-Williams, 1970.

3. Archaeological properties within Colorado are a fragile, limited source of valuable information about man and his patterns of adaptation. Many of these resources have been preserved by virtue of their isolation. These resources may become endangered through increased visitation and the resultant souvenir collecting.

Therefore, the Forest Service, to be in compliance with the National Historic Preservation Act and Executive Order 11593, should conduct a Cultural Resource Survey to identify potentially significant resources during the Comprehensive Management Planning Phase.

The Forest Service is obliged under Federal legislation to develop plans for the preservation and protection of significant resources.

Sincerely,


Arthur C. Townsend
State Historic Preservation Officer

ACT(BJL):ng

cc: B. Rippeteau, State Archaeologist
J. Hartmann, Coordinator, Historic Preservation
S. Sigstad, USFS

We agree that an intensive Cultural Resources Survey would be desirable as you suggest. On page 2-36 we have added a paragraph to identify your wishes for a Cultural Resource Survey and the estimated costs involved.

STATE OF COLORADO
Richard D. Lamm, Governor

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE

Jack R. Grieb, Director

6060 Broadway
Denver, Colorado 80216 (825-1192)

Division of Wildlife
Page 1 of 5

MAY 14 1979



May 14, 1979

TO: Steve Ellis
Colorado Clearinghouse

FROM: Don Smith
Wildlife Program Specialist

SUBJECT: Piedra River - Draft Environmental Statement and Wild
and Scenic River Study

The Division of Wildlife has reviewed the Draft Report on the Piedra Wild and Scenic River Study and supports its recommendation to include this river in the National Wild and Scenic Rivers System. The report indicates a devotion of considerable time and effort in analyzing the data, yet is brief, concise and to the point. The major problem is the difficulty in reading this document because of the fine print. I hope this is the last one of these! It appears that our purchase of the Don La Font Ditches in 1970 at the headwaters of the East Fork is a sore spot with the Forest Service. Of the 27 diversions within the study area, we are the only owner named in the report - and this occurs six times. Our Don La Font ditches 1 and 2 definitely do not "... dry the upper portion of the stream at its headwaters." (2-21) Actually, only a small fraction is captured and most of the sidehill runoff from this alpine area always flows into the East Fork. At any rate, we request that our name be deleted or that all ditch owners be named. Our specific comments follow:



During the field study, the stream courses below the lateral ditches were observed to be dry while the diversion ditches were carrying water. This reach of the East Fork is the head waters and is characterized by many intermittent streams.

Since Public Law 93-632 does not make a distinction between intermittent streams and yearlong streams, the study team asked the Forest hydrologist to determine what effect the diversions had on this headwater area of the East Fork. His field analysis, based on the existing geology and geography of the area, concludes that the unnamed ponds are replenished by ground water inflow after the initial snowmelt between the lateral ditches and the ponds. The hydrological review also recognized that the operation of the ditches is seasonally dependent upon the snowmelt and other ditch maintenance considerations. We have observed and believe that while the

ditches are in operation the meandering stream courses are de-watered by the ditches. Since the unnamed ponds apparently are recharged by ground water inflow throughout the rest of the summer season, it appears that the devastating effect of the ditches ends at the ponds.

The names of all the ditches and water use facilities are identified on page 2-28 and Table VI of Appendix C. Federal, State and local agencies are identified by name in the report to define areas of responsibility to the public.

//////

<u>Page & Paragraph</u>	<u>Remarks</u>
I-6 9	Under C. Biological Environment. The report discusses the number of wildlife species identified by the DOW. Why isn't this list appended? If it will be, this would be the place for reference.
I-10 10	A list of fish should also be appended.

//////

These lengthy listings of plant and animal species are informational items that do not affect the decision. Section 4(a) of the Wild and Scenic Rivers Act does not identify species listings as a specific report requirement. To reduce the volume of the document, these listings were omitted, although they have been used extensively in past Wild and Scenic River Studies throughout the Nation.

//////

<u>Page & Paragraph</u>	<u>Remarks</u>
I-10 3	Change The Colorado Fish and Game to "The Colorado Wildlife Division's field people..."
7	To the first sentence ending in high value fishery add "containing four species of trout; rainbow, brown, brook and cutthroat."
8	After Fishing pressure in the first sentence insert "which is relatively light."
I-19	Were any other water developments considered as a component beside's the O'neal Project? Why not?

//////

The O'Neal project discussed on page 1-20 was the only published report that could be assessed. Two other proposals were brought to the attention of the study team. The first was the potential for developing the conditional water rights discussed on page 1-20. The holders of the conditional decree did not present any plans that could be assessed. The second proposal is the Division of Wildlife's proposal to reconstruct their diversion facilities at the head of the East Fork. Since their plans involve transfer of water from an adjacent drainage into the lateral ditches at the head of the East Fork, as well as East Fork waters picked up by the laterals, we do not believe this proposal has any significant bearing on the decision of this study except that the operation of the ditches dewater the numerous small water courses below the ditches.

//////

<u>Page & Paragraph</u>	<u>Remarks</u>
I-20 3	Why is the name of the Fork deleted?
After I-31	Table XIII should present all alternative plans on the same page.
I-34 6	In describing the impacts on big game, alternative II is mentioned twice. Should the latter be III?
	We do not agree that "State wildlife concerns will remain largely unaffected under the three alternative plans" and ask that this be changed. Alternative I would attempt to maintain the existing conditions which favor fish and wildlife. Alternative III would open the area to development and adversely affect these resources by loss of habitat, loss of isolation required for breeding and rearing, water pollution and increased human disturbance. The impacts of Alternative II would be significantly less than Alternative III. The differences in hunting and fishing days under the alternative plans should be greater in Tables IX, X, and XIII. Impacts upon fish and wildlife under the three alternative plans should also be discussed on pages 1-25 and 2-31.

Page & Paragraph Remarks

1-35 Under D. Environmental Suitability. There are again two Alternative II's.

1-37 2 Under Plan I, I would add "The plan protects the outstandingly remarkable values for which it was chosen - scenery and geology."

Under A. Conclusions 2) This should read "A one-quarter mile segment at the headwaters of the East Fork from some unnamed ponds up to the Don La Font diversion ditches is slightly de-watered some years."

2-4 5 Add fish and wildlife list to appendix and insert reference after the first sentence.

2-11 4 Rewrite the second sentence as: "These ditches, now owned by the Colorado Division of Wildlife divert a small amount of water from the San Juan Basin into the San Luis Valley. This water is used for the survival and benefit of fish and wildlife resources in an extremely water-short drainage." The last sentence should be changed to read: Although a portion of the runoff within this quarter-mile section is diverted, most of the water continues into the East Fork."

2-18 8 Add the word "mountainous" after similar in the first sentence.

9 Cite Appendix B-II at end of paragraph.

2-21 6 Under Free Flowing. Delete the sentence which states the DOW ditches dry up the headwaters. This is not true because only a portion of the sidehill runoff is diverted into the ditches. Our diversion does not appreciably restrict the free flowing character of the stream and should be merely added to the number of others referred to in the last sentence.

2-23 10 Wildlife. Add: "The river corridor supports an abundant and diverse wildlife population of statewide significance. Although the fish and wildlife resources do not meet all requirements for being "outstandingly remarkable" they are very important and add a significant value to the river." Then add information about specific species.

Page & Paragraph Remarks

2-25 3 Change the third sentence to read: "Water can physically be restored to the Piedra East Fork through acquisition of water rights from the owners."

2-34 3. This 2) reads the same as on page I-37 and should be changed to read as I suggested earlier.

//////

Appropriate changes in the text have been made on pages 1-10, 1-20, 1-34, 2-35, 2-37 and 2-25 after consultation with the Colorado Department of Natural Resources. These changes are generally editorial in nature and do not change the findings of the joint Forest Service - State study team on the decision recommended by this report.

//////

cc: Harris Sherman
Jack Grieb
Bob Evans
Wayne Sandfort
Jerry Mallott
Bob Rosette
Rick Sherman
Herb Browning
Mike Japhet

Elizabeth T. Fox
AT LAST RAN
PACOLA SPRINGS
COLORADO

3/20/77

P.C. Sweetland
San Juan National Forest
701 Camino Del Rio
Durango, Colorado

Dear Paul:

Thank you for sending me the Piedra
D.E.S. At first quick glance I think
I approve selection of Alternative I. What
is the dead line for comments?

On page I-42, under Business and
Industry I am listed as "At Last Guest Ranch."
I wish I could collect from my guests, but
actually this operation has been, is, and
will be while I live, a livestock and hay
operation. Please delete "Guest" from the
listing.

Yours - Betty

////

Please excuse the mistake in the title of your ranching
operation. We have deleted the word guest on page I-42.

March 19, 1979
re: Piedra River

P. C. Sweetland
Forest Supervisor
U.S. Dept. of Agriculture
San Juan National Forest
701 Camino Del Rio
Durango, Colorado 81301

Dear Sir:

I have read and reviewed the "Draft Environmental Statement and Wild
and Scenic River Study". It appears to me to be a comprehensive and
complete study. I can add nothing to your report, but commend you on your
study and concur 100% with your recommendations.

Sincerely,

(Ms) Bonnie Orkow

Bonnie M. Orkow
1450 So. Filbert Way
Denver, Colo. 80222

J. S. O'Brien
Page 1 of 4

Re: Response to Draft Environmental Impact
Statement & Wild & Scenic River Study
Report, Piedra River.

524 La Porte Ave.
Ft. Collins, CO 80521

April 10, 1979

Walter D. Werner
San Juan National Forest
701 Camino Del Rio
Durango, Colorado 81301

Dear Mr. Werner:

Please note the change of address.

I would like to open my comments by noting that the Piedra River DEIS and Study Report is the most concise and well written that I have had an opportunity to read. I would like to compliment the Forest Service on their effort to reduce the size of the report and to employ a smaller type, thus saving paper. I further compliment the use of an adequate table of contents and index, which contribute to the readability and accessibility of the document.

Negatively speaking, I have always viewed the duplication of descriptive analysis in both the DEIS and the Study Report with much displeasure. Specifically, regional description, recreational activities, social and economic overview, and environmental description are unnecessarily repetitive.

In light of the existing legislation, I agree with the recommendations proposed for classification of the Piedra River and its inclusion into the National Wild and Scenic River System. Proper resource management of the river and related land uses will only be a reality when the First Fork roadless area is designated as wilderness. I think the recommendation for preservation for the river, in view of the concept of total river basin management. The numerous tributaries and the portion of the river below highway 160, in my opinion, deserve some level of classification as indicated by the original legislation, P. L. 93 - 621. However, I believe any preservation instrument that withdraws a part of the nation's water resources from potential destruction at the hands of the Bureau of Reclamation is laudable. With the tools at its disposal, the Study Team arrived at the correct decision regarding classification. I hope that the same will be said for the First Fork roadless area.

I feel that the DEIS and the Study Report are deficient in two respects. First, the discussion of the amendment to P. L. 93 - 621 which excluded tributaries and headwaters on National Forest lands found on page 2-2, is woefully inadequate. I believe that a full discussion of the concerns and conflicts which resulted in passage of P. L. 94 - 486 should be disclosed. Therefore, I request that this information be reported in the Final EIS and a discussion of how this legislation might effect the final land use management plan of the First Fork roadless area as well as the attitudes of Forest Service officials towards possible wilderness classification be presented.

J. S. O'Brien
Page 2 of 4

The Forest Service and members of the joint Federal - State Study Team were not asked to testify before the House and Senate Committees on H1190 and S16879, The Congressional Record (September 27, 1976 - H1190 and September 28, 1976 - S16879) does not discuss the pros or cons of the Bills that resulted in the wording and passage of Title VII of Public Law 94-486, October 12, 1976.

This document does not discuss the merits of the First Fork Roadless Area (RARE I) nor the Piedra wilderness proposal of RARE II. These actions are independent decisions and the wilderness issue does not affect the decisions of the Wild and Scenic River Report.

Secondly, I think that a discussion of the closing the San Juan Lumber Company sawmill in Pagosa Springs and its possible effect on future timber cutting in the Pagosa Springs area is warranted. The evaluation of the socio - economic impacts insufficient without this discussion. I request that this discussion be presented in the final EIS along with data showing timber harvests in the San Juan National Forest before and after closing of the sawmill in Pagosa Springs and future projections for timber harvests assuming both scenarios, with and without the sawmill in operation. Further, I request a presentation of a discussion of the events leading up to the closure of the sawmill also be included in the EIS. I believe that the issue of timber harvest was avoided in the DEIS and the Study Report, and I alleged deliberately so to evade conflict in the possible classification. "However, it is my opinion that timber harvest is the critical issue involving P. L. 94 - 486 and for determining the future of the First Fork roadless area as wilderness. It is important to note that there is an insignificant difference in the annual output of wood fiber between the no classification alternative and alternative I. However, I doubt if this would be the case if P. L. 94 - 486 were not enacted. I request information be provided in the EIS that refutes or substantiates the claim that if classification of the tributaries of the Piedra River had been proposed in the DEIS and Study as per the original legislation P. L. 93 - 621, significant reduction in potential timber harvest of the First Fork area would have been acknowledged by the Forest Service. Timber harvesting, road construction and sedimentation of the river system, wilderness and wild and scenic river classification are the important concerns. This is what water and related land use management is all about. I disdain separation of the issues.

Future projections for timber harvest in the area assuming both scenarios for the Pagosa Mill appears not to be relevant to the decision of this study because the San Juan Lumber Company is not the only purchaser of timber on the San Juan National Forest. Additionally, the mill closure occurred after the passage of P. L. 94-486 striking the tributaries and headwaters from the study. The San Juan Lumber Company has not conveyed their specific reason for closing the mill to the Forest Service.

Management plans can be the equivalent of conservation/preservation tools. I disagree with one aspect of management proposed in the study report, a proposal usually promulgated through Forest Service regulation philosophy. I disagree with the philosophy of the Forest Service to attempt to protect the people from themselves. With regard to white water boating, on p. 2-18, the statement appears that, "strict controls will have to be placed on white water boating to maintain public safety." Instead of "strict controls", ample warning should be devised, (possibly in the form of signs strategically placed, for instance, near the Piedra bridge 631, First Fork bridge, and near the Lower Piedra campground) and information regarding the possible level of difficulty made available for easy dissemination. I have entertained different opinions on this at other times, but I believe that the Forest Service should not judge who is capable of attempting a white water trip on any river nor when it should be attempted.

//////

The sentence you refer to on page 2-18 does not relate to the description of resources and uses that the section describes and has been deleted. On page 2-36 we have added the management concern for public safety. Section 10(d) of the Wild and Scenic Rivers Act authorizes the appropriate use of the general statutory authorities relating to the National Forests to carry out the purposes of this Act. Public safety is a concern and responsibility of the Forest Service in established statutes, policy and directives.

//////

Further, I disagree that access and take out points for white water boating need to be developed to the tune of \$34,250. This is in response to the information presented on p. 2-36 and 2-37. This typical of the ability of the Forest Service to "make work" increase the budget and manpower at the expense of taxpayers. The development of facilities, access points, and takeout points related to white water boating are superfluous because:

1. They serve to increase unnecessarily the use and possible overuse of the resource.
2. The season and runoff for white water boating on the Piedra is too short and too limited to warrant such an expense. It is inconceivable that extensive use of this white water resource will occur.
3. Simple access and take out clearings should be all that need be required. Access already seems to be available.

//////

The proposed development for access and take out points only creates parking, toilets and garbage collection facilities. Fishermen and hikers will use these facilities, as well as boaters. We believe use along the Piedra will increase because the study of this relatively obscure river has been given national attention.

We believe white water use on the Piedra will increase as more and more boaters are turned away from the more popular

western rivers that are under systems of user rationing. Our projections at this time are based on the number of inquiries that have been made regarding the boating opportunity on the Piedra. We believe that specific management practices will have to be developed, regardless of what the Congress decides. We welcome your comments for any subsequent planning actions for the river.

//////

My final comments are of a more general nature. I would very much like to see the "growth ethic" removed from the political structure in the American government. This applies to the Forest Service. Examples appear in the report:

- a. 1-2. "9) Production of water should be increased through forest management while maintaining quality."
- a. 1-6. "The economically important species are the elk, mule deer, black bear and bighorn sheep."
- a. 1-8. "This is continually higher than desired and indicates a definite need to increase employment opportunity." I disagree with this statement on unemployment. The high unemployment rate indicates a need to limit population influx to a level consistent with employment opportunity. Economic stabilization will occur as the populace leaves the area and the economy returns to a level consistent with the available jobs. Employment can not be created if there are no jobs.
- a. 1-15. "Preserve the natural beauty of the State while still providing jobs." This statement epitomizes the point I am expounding on.

Inherent in Forest Service management philosophy is desire to conserve while stimulating the economy. Progress, management, improved social well-being do not have to be associated with growth, growth of the economy, or growth of the population. If the Forest Service would stop planning for increased uses of the national resources along with the rest of the government, eventually people would get the idea and turn off the babies already.

Eventually, wilderness classification may no longer be appropriate or necessary. Once gas and oil are no longer available for private consumption, the "management" of our backwoods resource should cease. Helicopter logging will remain a dream as flight fuel prices soar away. Hopefully, the day will arrive when backpackers have to hike from highway 160 to get to Vermilche Wilderness, all national forest roads will be closed to motor vehicle traffic and wilderness preservation planning will no longer be necessary, because it will be wilderness whether the Forest Service plans for it or not. Just how far is the Forest Service planning ahead?

I enjoyed reading the EIS and the Study Report and appreciate the opportunity to respond. The evolution of the DEIS by the Forest Service has shown a consist improvement in quality and conciseness. This DEIS has been the best I have seen by any agency. I still feel as though the Forest Service deliberately and persistently refrains from directly confronting the controversial issues.

Respectfully submitted,

J. S. O'Brien
J. S. O'Brien



Wildlife Management Institute

709 Wire Building, 1000 Vermont Ave., N.W., Washington, D.C. 20005 • 202 / 337-1774

DANIEL A. POOLE
President
L. R. JAMES
Vice President
L. L. WILLIAMSON
Secretary
JACK S. PARKER
Board Chairman

Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, Colorado 81301

Dear Sir:

The Wildlife Management Institute is pleased to comment on DRAFT ENVIRONMENTAL STATEMENT AND WILD AND SCENIC RIVER STUDY, PIEDRA RIVER, San Juan National Forest, Colorado.

We support selection of Alternative Plan 1 as the preferred alternative.

The wildlife sections need strengthening by inclusion of a statement about the benefits wildlife will receive from improved riparian protection and retention of snags and mature trees in the River Corridor. These positive values to many wildlife species should not be overlooked.

|||||

We agree that the snags and mature trees provide wildlife values. Adding additional comments on these values will not significantly change the recommendations.

|||||

On Page 2-18, 9th paragraph, 1st line, we object to the word "varmints" used to classify an undefined group of wildlife species of interest to many people.

These remarks have been coordinated with William B. Morse, the Institute's Western Representative.

Sincerely,

Daniel A. Poole

Daniel A. Poole
President

DEDICATED TO WILDLIFE SINCE 1917

John H. Hill
Page 1 of 2

JOHN H. HILL

SUITE 140 CAMPBELL CENTRE
6350 NORTH CENTRAL EXPRESSWAY
DALLAS, TEXAS 75206

214/692-7021

April 25, 1979

United States Department of Agriculture

Forest Service

San Juan National Forest

701 Camino Del Rio

Durango, Colorado 81301

Attention: Mr. P. C. Sweetland

Forest Supervisor

Re: Piedra River Draft Environmental Statement and Wild and
Scenic River Study

Gentlemen:

I am presently the owner of an undivided one-half interest in the Piedra Valley Ranch located in Archuleta and Hinsdale Counties, Colorado, through which the Piedra River runs for approximately two and a half miles. Based upon the draft statement that was sent to me, it would appear that approximately eight hundred acres will be affected by the study insofar as it pertains to my ranch.

Without any question, that portion of the Piedra River which runs through my ranch is some of the most scenic and beautiful country in the United States. This area of the river is known throughout the country for its beauty, and has oftentimes been photographed for publishing in both local and national publications. I purchased the acreage included within the environmental study, together with the remainder of the ranch, with the intent of subdividing and developing the property for multi-family use. With this type of development in mind, I proceeded to acquire additional water rights for the property so as to be able to construct numerous small lakes and to insure that an adequate water supply would be available for such multi-family use.

Having acquired the land and the necessary water rights, we proceeded with extensive engineering for the lakes and architectural work and overall subdivision planning for the development of the property. We have continued to maintain our conditional water rights and to proceed with the overall development of the property to the extent that we purchased additional lands on the northernmost portion of the ranch, thus giving us additional frontage on the Piedra River.

Although the study is highly detailed and filled with many facts and figures, suffice it to say that should the portion of the Piedra River running through my ranch be condemned and thus restricted as to its use, it would jerk the very heart out of my proposed development. At this point, it is impossible for me to determine the exact acreage covered by the study as it relates to my property, but in any event the river frontage could not possibly be considered as having a value of less than \$20,000 per acre with respect to any proposed development.

|||||

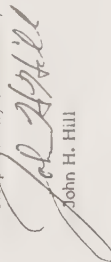
The 1977 land price study discussed on page 2-37 was an appraisal utilizing the market value approach. The 16 tracts were compared with comparable lands involved in recent (at that time) land sales transactions. The market value of the 16 tracts varied from tract to tract. The estimate we used is the average value per acre of the 16 tracts. The estimated cost is also based on the acquisition of partial interests through easements. We used 80 percent of the fee value to reflect the partial interest cost.

Prior to any land transactions under the authority of this law, each tract of subject land will be individually appraised. To compensate for the appreciation of land values since our 1977 land cost study, we have added a paragraph to the discussion of land values on page 2-37.



The study by the Department of Agriculture and the many unknowns resulting therefrom has caused a great expenditure of time, effort and expense on my behalf with respect to my development program, and has virtually made it impossible for me to proceed with any actual construction work, and the alternatives in the event of condemnation have been so vague in general as to make it impossible for me to proceed with my development in any logical and definitive manner. I am not opposed, of and in itself, to environmental scenic protection. Quite the contrary, I felt that this was the kind of land that should be preserved for the beauty and ownership by the people of this country under highly restrictive deeds and, particularly with such feelings, I intend to protect my rights to the fullest and wish to emphasize that any arbitrary decision by the Department of Agriculture to the effect that this acreage is not "usable" and thus not given a realistic value as it relates to the entire acreage covered by my ranch will be vehemently defended.

Respectfully submitted,


John H. Hill

JHH:GLL:jn



"THE BIG PASTURE"

PIEDRA VALLEY RANCH

Pagosa Springs, Colorado



May 3rd, 1979

Reply to: 2750 Bryan Tower
Dallas, Texas 75201

United States Department of Agriculture
Forest Service
San Juan National Forest
701 Camino Del Rio
Durango, Colorado 81301

Attention: Mr. P. C. Sweetland
Forest Supervisor

Re: Piedra River Draft Environmental Statement and Wild and Scenic River Study.

Gentlemen:

I am writing in response to your request for comments on the Piedra River Wild and Scenic River Study. I own one-half interest in the Piedra Valley Ranch, located in Archuleta and Hinsdale Counties, Colorado, through which the Piedra River runs for 2-1/2 miles in the northwest corner. The other one half interest in the ranch is owned by John H. Hill, of Dallas, Texas.

We concur with the study conclusions that the river in the area of our ranch is Wild and Scenic and would be desirable to maintain in its present state. The problem is the value of the river valley is much greater than you have estimated in your report. The land is not too valuable from the standpoint of agriculture as it is rugged and partially inassessable. The real value of this land would be as a development project for expensive summer homes with recreational facilities. Last year we built a road into the river valley area and if we are unable to work something out on the Wild and Scenic River sale, we propose to continue the development of the river valley. Selected lots along the river would easily sell for \$20,000 each.



The 1977 land price study discussed on page 2-37 was an appraisal utilizing the market value approach. The 16 tracts were compared with comparable lands involved in recent (at

the time) land sales transactions. The market value of the 16 tracts varied from tract to tract. The estimate we used is the average value per acre of the 16 tracts. The estimated cost is also based on the acquisition of partial interests through easements. We used 80 percent of the fee value to reflect the partial interest cost.

Prior to any land transactions under the authority of this law, each tract of subject land will be individually appraised. To compensate for the appreciation of land values since our 1977 land cost study, we have added a paragraph to the discussion of land values on page 2-37.



The study indicated the purchase of certain rights in a strip along the river. This would divide and separate the northwest corner of the ranch from the main part of the ranch, and would severely decrease its value in that we would have no access to approximately 600 acres in this area other than through the national forest.



Section 6(a) of the Wild and Scenic Rivers Act limits the acquisition of land in fee title to not more than an average of 100 acres per mile on both sides of the river. However, on a willing-seller basis the law does not preclude acquisition of land through exchange on Land and Water Conservation Fund purchases.



In summary, the main comment regarding the Wild and Scenic River proposal is that you are talking about a great deal more money than is included in the report to obtain the Wild and Scenic River easement. The proposed easements would be equal to the value of the land in that they would prevent sale for summer home developments. We urge the Forest Service not to reach some erroneous conclusions in recommending to Congress that the river land through our ranch can be obtained for anything less than \$5,000,000.

Very truly yours,

Louis A. Beecher, Jr.

Louis A. Beecher, Jr.

LAB:lea

May 9, 1979

Alexandra Urmitage,
929 11th St.
Boulder, Colorado
80302

Dear Sir,

The wilderness in Colorado is rapidly vanishing. We must save it! I fully support the Forest Service proposal to designate the Piedra, in Colorado as a National Wild and Scenic River. Please consider adding my letter to the comments on the draft environmental statement concerning the Piedra River.

Sincerely,

Alexandra Urmitage

Brian E. Grabert, M.D.
850 Hill Street
Denver, Colorado 80220

Mr. Sweetland,
I support the Forest Service proposal
to designate the Piedra river in Colorado
as a National Wild and Scenic River.
Could you please add my letter to the
comments on the draft environmental statement
concerning the Piedra.

Sincerely,
Dave Devine
1029 Jackson St
Denver, Colo 80206

Paul Sweetland
Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, Colo. 81301

Dear Paul,

I wholeheartedly support the Forest Service
proposal to designate the Piedra River as a National
Wild and Scenic River. Colorado has yet to establish a
first wild and scenic river. Let this be the first step
towards preserving our beautiful state for future
generations.

Sincerely
Brian E. Grabert, M.D.

DEAR SIR

IN REVIEWING YOUR DRAFT EIS FOR THE
PIEDRA RIVER I WOULD LIKE TO SUPPORT YOUR
PROPOSAL TO DESIGNATE THE PIEDRA IN COLORADO
AS A NATIONAL WILD & SCENIC RIVER.

Row Thompson
416 N. 8th
ASTEN, CO 81611

Harry A. Patterson
Page 1 of 2

Harry A. Patterson
P.O. Box 394
Flagstaff, Arizona 86001

May 13, 1979

Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, Colorado 81301

Dear Sir:

Please enter my comments regarding the Draft Environmental Statement for the Piedra Wild and Scenic River Study and hope it will be effective in the right direction.

To begin with, I am very well acquainted with the entire area of study having lived on the Patterson ranch in the Weminuche Valley for a great part of my life. I have known the study area for the period 1918 to the present time. I have retired from the U. S. Soil Conservation Service at Durango, Colorado in 1975 and am entirely familiar with the study of all environmental natural resources.

Therefore, I am going to tell you, the Congress of the United States of America, The President of the United States and the people who are citizens of the same.

The environmental study is a pure and simple farce. I have been associated with many governmental agencies in studies ranging from flood control, watershed management, private lands, agricultural uses, wildlife habitat, vegetative management on both private and public lands and much, much more. I am fully aware that any research group which is politically motivated can make the study appear in any way which is to their advantage.

Since I am a conservationist, pure and simple, I do not favor the setting aside of any areas of public lands under such misleading captions as wilderness or wild rivers. I am entirely in favor of the use of all public lands according to their capabilities under conservation management. I am in favor of adequate access to all areas of public lands for the proper management and protection thereof for their greatest use and benefit to our country whether it be production of water in its natural form of purity, the proper harvest of timber and vegetation by controlled management, the environmental protection of all habitat and its purpose, and the limited mining of needed minerals for the benefit of the economy, but not the devastation of the beauty of the natural surroundings.

There are no such things as wild rivers in the area being studied. These rivers are wild only in flood stage and are barely a trickle during the dry months of the year. The areas have other uses beside being tied up in red tape and needless non-usage except for recreation.

Harry A. Patterson
Page 2 of 2

I will bear record that the setting aside of private preserves for people in the pursuit of recreation has done more damage to our national resource lands than any other action which the government has taken. Our public lands are being literally overrun with people seeking recreation and the supposed benefits of the natural outdoors.

Water quality has suffered because of man-made pollution, the wildlife has been forced to hide in out-of-the-way pockets away from their natural feeding and breeding grounds and overuse of vegetation on some watershed has been the result. The mature timber in some areas, and large areas is at the uncontrolled mercy of bugs and man-made fires with no access for equipment and no management to save these wasted resources for our proper use.

In a political sense, the U. S. Government has passed laws which supposedly would benefit our remaining natural resources. In fact, these laws are purely political and benefit only the special interest groups and are, in fact, detrimental to the protection of our most valuable natural resources.

The process by which these wilderness and wild river studies are prepared for submission to our lawmakers is also a complete farce. The study groups are composed of representatives of the tourist industry which benefits from tourism. You will find the business representative on the study panel for the same purpose and that is putting the dollar ahead of the real purpose. You will find the representatives of the recreation industry and the so-called conservation groups there also which represent the fisherman, the bird watcher, the nittywitty specialist which operates strictly on a one-track course and you will find the great conservationist who knows so little about conservation that his words make the biggest impact on the public.

Then there is the politician who does his shameful act entirely for votes from the uninformed public which think that the conservation groups are the real experts on conservation when, in fact, they are the real experts on only political science.

Our once proud and dedicated U. S. Forest Service is led by a political group at the top, including a Mr. McGuire and others who are by no means capable of heading the organization and its true purpose.

Please take this statement for what it is worth and if you value the true principles of conservation and the environment of our public lands then let it be known.

Sincerely,
Harry A. Patterson
Harry A. Patterson

Forest Supervisor
San Juan National Forest
701 Camino del Rio
Durango, Co. 80301

16 May, 1979

Dear Sir,

I am writing simply to express my support for the proposal to confer Wild and Scenic status on the Piedra River. It seems, according to the draft environmental impact statement, that the economic impacts of such a decision would be minimal while the advantages of wildlife habitat preservation would be great.

Living here in the expense of the East Slope metropolis, I am an infrequent visitor to the San Juan Mountains, yet I am non the less keenly interested in promoting any possible measure of preservation for that area. I feel this would be in the best interest of all of us - near and far.

Yours Sincerely,

Jim Bock
Jim Bock
1859 23rd St.
Boulder, Co. 80302

Paul Sweetland
Forest Supervisor
San Juan Nat Forest.

Dear Sir,

May 17, 79

I would like to say I support the Forest Service proposal to designate the Piedra River as a National Wild & Scenic River. This area has many values worth preserving and one of the most important is its wildlife values. The ecological significance of preserving the Piedra will only be realized when it is made a Wild & Scenic River. I encourage you to push for Wild & Scenic status for the Piedra. Thank you and please include my comments in the hearing record in the draft EIS concerning the Piedra.

Steve Zachary
29952 Dorothy Pl.
Evergreen, Colorado
80439

UNIVERSITY of COLORADO WILDERNESS STUDY GROUP



Forest Supervisor Paul Sweetland
San Juan National Forest
701 Camino del Rio
Durango, CO 80301

May 14, 1979

Dear Mr. Sweetland:

In response to the Wild and Scenic Draft Environmental Impact statement on the Piedra River, we strongly support the most protective classification, Alternative One, which would designate 32 miles as wild, 12.5 miles as scenic and 5.5 miles as recreational.

Not only will the wildlife inhabitants of the Piedra Valley---including 3,400 elk, mule deer, black bears, bighorn sheep and peregrine falcon---benefit from such designation, but the fishery of the river, clearly high-value according to the Division of Wildlife, will also prosper.

In conclusion, the environmental values of Alternative One certainly outweigh the minimal economic costs due to negligible mineral losses and slight timber negatives. We appreciate your thoughtful consideration of all proposed recommendations for the Piedra and hope that you continue to advocate Alternative One in your final decision making.

Sincerely,

Missy Reda
Norm Muller

Missy Reda
Norm Mullen

MR/mbk
cc: Governor Richard Lamm
Representative Tim Wirth
Senator Gary Hart

UNIVERSITY MEMORIAL CENTER BOULDER, COLORADO 80302 (303) 492-6570

PEX/pem

Dennis Coules
522 Oeste Drive
Davis, CA 95616
May 18, 1979

Forest Supervisor
San Juan National Forest
Durango, CO

Dear Forest Supervisor:

I am writing in support of the plan to designate the Piedra River as a wild and scenic river. I strongly urge the adoption of Alternative 1 or the draft environmental statement, which would allow the most protection for the river by designating 32 miles as "wild", 12.5 miles as "scenic" and 5.5 as "recreational".

Any resource withdrawals affected under this plan are many-times outweighed by the benefits that will accrue to the fisheries, wildlife and recreational opportunities gained in the area.

Thank you for your consideration of these comments.

Sincerely,

Dennis Coules
Dennis Coules

May 31, 1979

Mr. Paul Sweetland
Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, Colorado 81301

Dear Mr. Sweetland:

We strongly support the proposed designation of the Piedra River as Wild and Scenic. The incredible beauty of the river and its environs deserve and are in need of the protection that such a designation would provide. The fact that our state is without any Wild and Scenic Rivers is appalling. Wild and Scenic designation of this 50.5 mile stretch of the Piedra would be a landmark decision for Colorado.

Sincerely,

Tudor Marks, Jr.
Patricia Marks

Tudor Jr. and Pamela Marks

UNITED SPORTSMAN'S COUNCIL OF COLORADO

6740 E. Hampden Ave., Suite 308 - Denver, Colorado 80224 - (303) 759-9905

May 24, 1979

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Mr. Paul Sweetland
Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, CO 81301

Dear Mr. Sweetland:

The United Sportsman's Council of Colorado is a state coordinating organization of some 15,000 hunters and fishermen who enjoy Colorado's outstanding natural resources. This letter is to offer our support for your recent recommendation re the Piedra river.

The two forks and the main stem offer outstanding wild river fishing for rainbow, brook, cutthroat, and brown trout in a setting that is fast disappearing in Colorado. The area surrounding the river provide excellent hunting for elk, mule deer, and black bear, along with other smaller wildlife. Any development will have a negative effect on these resources.

The one comment we have regarding the draft EIS, is the statement the Colorado Division of Wildlife completely dries up the headwaters of the Piedra as a result of its Rio Grande diversion, at certain times of the year. We understand this is not true.

Thank you for the opportunity to provide these comments.

Sincerely,
Allen Karron
Allen Karron
Vice President

The point on whether or not the State's lateral ditches at the head of the east fork dry up the headwaters is discussed further in the response to the letter by Don Smith for the Colorado State Division of Wildlife. During the field examinations and on subsequent occasions the stream channels between the Continental Divide, below the lateral ditches, down to the unnamed ponds have been dry while the ditches were operating. Your last paragraph suggests that the State's diversion ditches affect all of the headwaters of the Piedra. Our discussions on pages 2-21, 2-25, 2-27, and 2-34 are site specific to that portion of the headwaters of the East Fork between the Continental Divide down to the unnamed ponds.

The Colorado Mountain Club

GROUPS: ASPEN • BOULDER • DENVER • JUNIOR • DENVER WHITE RIVER • KIDS • EL PASO
LEADERS: MILLER • FORT COLLINS • LONGS PEAK • SAN JUAN • WESTERN SLOPE

2530 WEST ALAMEDA
DENVER, COLORADO 80219

TELEPHONE
922-8315

OFFICE HOURS: MONDAY THRU FRIDAY 9 A.M. to 2 P.M. AND MONDAY, TUESDAY AND THURSDAY EVENINGS 7 TO 9 P.M.

Mr. Paul Sweetland, Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, Colorado 81301

May 25, 1979

Dear Mr. Sweetland:

The Colorado Mountain Club has over 5600 members in 12 Groups throughout the State. We are one of the largest outdoor organizations active in the State. Most of our members participate regularly in the numerous activities sponsored by the CMC.

It was not too long ago that Colorado was known throughout the country as a paradise for fishermen. Today that label can be seriously questioned. The deterioration in the quality of Colorado's streams and fishing can be primarily attributed to the development of Colorado's rivers and the accompanying commercial development adjacent to and in the immediate vicinity of the rivers. This deterioration could have been stopped or greatly reduced if Wild and Scenic River Status could have been granted to many of our fine rivers.

It is unbelievable that in 1979 Colorado still does not have one mile protected under such status. This protection goes far beyond protecting fishing. It involves protecting the habitat for big game; ensuring fresh water; preserving the scenic value of our rivers; protecting the bank areas from excessive erosion due to all types of construction; and preserving an entire ecosystem region.

For all these reasons, the Colorado Mountain Club supports the 50.5 miles of proposed Wild, Scenic, and Recreational status of the Piedra River in southwestern Colorado. This protection would ensure that the river area would remain as is. We also wish to thank the U. S. Forest Service and the Colorado Department of Natural Resources for developing this fine proposal. Please include these comments as part of the record for the draft EIS.

Sincerely yours,

Fred Ruckhaus

FRED RUCKHAUS
President

FR:mlp

CC: Governor's office

61 Garfield
Denver, Colo. 80206

Mr. Paul Sweetland
Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, Colo. 81301

May 27, 1979

Dear Mr. Sweetland:

I have recently become aware of the proposal to designate over 50 miles of the Piedra River as wild, scenic and recreational riverway and its proposed inclusion in the National Wild and Scenic River System.

I am familiar with the natural beauty of the area and the many forms of wildlife in this area. Please add my letter and name to those supporting the addition of the Piedra to the Wild Rivers list.

Sincerely yours,

Virginia E. Steele
Virginia E. Steele

Ms. Lynn
Hill-Monroed, Grace 1237
WOOD AVE. COLORADO SPRINGS, COLO 80903
Apr 5

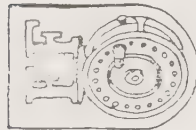
Dear Mr. Sweetland;

I totally support the Forest Service's proposed designation of the Piedra River as a Wild River. I need only, with all its many miles of beautiful river system, Colorado has none that has been provided with the Wild River status.

We must work to designate other river areas at the state. I applaud your actions with regard to the Piedra.

Very Sincerely,
Lynn Grace

31 May 1979



FRONT RANGE FLY FISHERS

5/30/79

Mr. Paul Sweetland
Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, Colo. 81301

The Piedra River definitely should be saved as a river included under the National Wild and Scenic River System. To save every river

It is inconceivable to save every river in sight!

The Piedra Valley provides excellent big game habitat (winds) Below 9,000 feet. To endanger species, peregrine falcon, as well as numerous eagles would be threatened significantly by such a dam project.

We need power and water. ... But we need selections for base necessary dam. The site selections for outstanding geologic must be placed where outstanding areas and scenic, wildlife and recreation areas are not destroyed.

Sincerely,
Clifford A. [unclear]
President of Fly Fishermen
and Trout Unlimited -
(state legislative clearing)

2221-All N. Pineapple Ave.
Malbourne, Fla. 32935
30 May 1979

Mr. Paul Sweetland
Forest Supervisor
San Juan National Forest
101 Camino Del Rio
Durango, Colo 81301

Dear Mr. Sweetland,

We enjoy immensely vacationing in Colorado and wish to see all wilderness areas retained and maintained. We also support the Forest Service proposal to designate the Piedra in Colorado as a National Wild and Scenic River.

Please add our letter to the comments on the draft environmental statement concerning the Piedra River.

Sincerely,



D. L. Likens (Mr. & Mrs.)

May 31, 1979

Paul Sweetland, Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, Colo. 81301

Re: Wild River Status for the Piedra River

Dear Mr. Sweetland:

The proposal by the Forest Service and the Colorado Dept. of Natural Resources for inclusion of 50 miles of the Piedra River in the National Wild and Scenic River System gets my vote!

Inclusion of 16,000 acres of land area along the river is commendable also; I know from on-site experience that the river's environment deserves protection too, for its big and small game habitat, bird sanctuaries, good fishing, and scenic values.

We still do not have even one designated Wild and Scenic River in Colorado. The Piedra certainly qualifies, and should be protected from dams and other types of development.

These great rivers have been the life-blood of our state, serving many purposes other than scenic value. Damming alters and destroys much of a river's environment, and the repercussions on watershed quality, wildlife, vegetation, and efficient drainage are devastating and irreversible.

Please include this letter for Wild River status for the Piedra River in the record of public comment on the DEIS.

Sincerely yours,



Mrs. Dorothy Gumaer

cc. Harris Sherman, Colo. Dept. of Natural Resources

MRS. J.W. (TERRY) HERSHEY
ONE LONGBOW LANE
HOUSTON, TEXAS 77024

Mr. Paul Sweetland
Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, CO 81301

Dear Mr. Sweetland:

As a ranch owner in Pagosa Springs, I heartily urge the inclusion of the Piedra River in the wild and scenic river system. The area is lovely, well suited, a prime vacation viewing habitat for people as well as territory for critters. Opposition has come from neighboring ranchers who fear loss of irrigation waters from the tributaries. We use irrigation water ourselves. My observation is that most of it is wasted through inefficient use. My further observation is that the Piedra area has far greater benefit to a far greater number of people as a wild and scenic river and that implies than in any other use.

Sincerely,

Terry Hershey
Terry Hershey
(Mrs. J.W. Hershey)

Four Mile Ranch
Pagosa Springs, Colorado 81147

TH/as-

7529 Tudor Road
Colorado Springs, CO 80919
June 4, 1979

Paul Sweetland, Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, Colorado

Dear Sir:

I am writing in support of the proposal to include the Piedra River, (50.5 miles) in the Wild and Scenic Rivers System.

I would like my letter to be included in the draft environmental statement which the Forest Service has drawn up.

Sincerely yours,

Ruth S. McKown
(Mrs.) Ruth S. McKown

CC: Harrison Sherman
Bill Armstrong
Ray Kogosek

colorado white water association



Walter Werner
San Juan National Forest
701 Camino del Rio
Durango, Colorado 81301

4260 E. Evans
Denver, Colorado
80222
June 4, 1979

Re: Review of Piedra River Wild and Scenic River Study and Draft
Environmental Statement

Dear Mr. Werner,

In general, we appreciate the conclusions of this report more than its format. You are to be commended for combining the report and DES, but we think you have made an error in beginning the report with Principles and Standards Analysis. This analysis may be required for wild and scenic river studies, but it is dull under the best of circumstances, even with the best of writers elucidating it. It is doubly dull when the reader comes to it without the benefit of the information on the river and its economic resources which is most fully contained at the back of the document. Perhaps you could obtain a copy of the John Day Wild and Scenic River Report; it is an example of the format we are inclined to favor. Principles and Standards are the last chapter in that report, and that mode of organization is both clearer to the reader and fairer to the river. It is, after all, a river which is being studied, not a series of alternatives.

Concerning the river, we note some substantive lapses. We realize that the tributaries were excluded from the Act by an amendment. You, nonetheless, had developed data on them, and the report needs that data. Most of the tributaries, of course, would have been found ineligible anyway, and rightly so. A few, however, would make desirable components of the National Wild and Scenic River System. You are not only within your rights, but it is a part of your duty, to indicate which ones of these would have qualified, roughly what the impacts of including them would have been, and that they should be studied. Other wild and scenic river studies have gone beyond their specific direction, their authors being of the mind that Congress would not have asked for a study had Congress known beforehand what it wanted. We urge you to fulfill your unstated responsibilities in studying this river.

We strongly suspect that certain of these tributaries could be included without jeopardizing the economy of the area. The particular tributaries we have in mind are Williams Creek, Weminuche Creek, Little

Sand Creek, Sand Creek, Coldwater Creek, Mosca Creek, Trout Creek, First Fork, and Little Mosca Creek. To make some statements regarding the eligibility of these creeks and the impacts of designating them on timber harvest and environmental quality will be a step toward full drainage basin planning; we hope you will do so in the final environmental statement for the Piedra Study.

We believe that the United States Congress has clearly mandated the scope of this study when Public Law 94-486 amended the original study direction by striking out the tributaries and headwaters.

We definitely disagree with your plan to install boating facilities, ie. takeout points. Table XIII indicates the same amount of whitewater use will take place with and without designation-- 6300 RVD. In the first place, this figure is ludicrously high for what is a one or two-day trip. If we assume it is run in two days and has a season of about 30 days, you are trying to tell us that 100 people per day will be running it, which is as much use as the Middle Fork of the Salmon gets. If the season is 60 days-- you include no information on the season or the useful flow levels so we are relying on the reports of our members-- this is still a use of 50 people per day. We think this magnitude of use will never materialize. First, the river is difficult. Second, the river is far from concentrations of boaters and is near other, less difficult streams, both factors that militate against heavy use. Third, the season is somewhat unpredictable, too unpredictable, for instance, to support commercial operations on any but a fly-by-night basis.

The 6300 Recreation Visitor Days differ from recreation visits. A recreation visit expresses use in terms of a one time visit for one person. Recreation visitor days express use in increments of 12 visitor hours which may be aggregated continuously, intermittently or simultaneously by one or more persons. Use of this measure began in the mid 1960's to provide a uniform reporting system between the various Federal agencies and the Heritage Conservation and Recreation Service, formerly the Bureau of Outdoor Recreation.

Whitewater use on the Piedra had not been measured or of concern prior to the study. Our projection of annual use started with a base year of 100 visits (11.6 persons per day for a 60 day period). We computed a straight line projection of 50% increase in use for the first three years as the river is being discovered, thence a 25% increase thereafter for 10 years. We believe the 13 year projection is well within a reasonable planning horizon. This projection increases to 3,127 visits by the thirteenth year which converts to 6,254 (6,300) recreation visitor days.

The projection includes use by rafters and kayakers. The 50 percent and 25 percent increases are based on the review of user statistics presented at the River Recreation Management and Research Symposium, January 24-27, 1977, at Minneapolis, Minnesota. The statistics were developed by researchers, (both Federal and University) and user associations.

The 100 visits that the projection starts with is derived from interviews with local whitewater enthusiasts who have run the river several times each year and discussions with commercial boatmen who have expressed an interest in the river.

Two assumptions are found in the projection.

- As the number of private user being unsuccessful in permit draws on the more popular rivers increases, they will be looking elsewhere for rivers to run.
- The Piedra has been run for a number of years by local boaters and some New Mexico boaters and apparently was a well kept secret. National attention focused on the river through the study will attract increased whitewater use.

The projections do not account for the current energy concern and its overall effect on national recreation use. Nor do they account for the possibility of user rationing, if necessary, to protect the river's environment.

So we would make two comments. The use won't be there to justify the facilities, except, perhaps, if the facilities begin to create it. We are against the silly circular process by which facilities are built to serve use that doesn't exist, thus creating use which would not otherwise have arisen, which then justifies more facilities for more artificial use, which eventually makes a lovely river like the Piedra a circus. Second, if there is going to be the same amount of use under no action as there is under designation, facilities are called for under both or not called for at all. In this case they are not called for at all and should be dropped from the report and your plans.

We are strongly against agency limitations on river use based on public safety. To put it frankly, if you people had to hire others to run the river and survey it for you, if, in short, you can't even run it yourself, why do think you can decide who is and who is not competent? River running, as has been judicially recognized, is an assumed-risk sport; it is not practiced by those who brood about their own safety, but by those who seek adventure. To those people, the imposition of competence standards by an agency which hasn't any particular river running ability of its own is obnoxious. We suggest you delete the sentence on page II-18 calling for strict controls, and replace it with an informational program and installation of a usable staff gage. Others who manage whitewater rivers have faced this problem and many have decided that by making judgements regarding river hazards or user competency they have made themselves potentially vulnerable to claims made by users injured under "safe" conditions or after having been judged "competent". We suggest that you might wish to consult with your fellows who manage the Middle Fork of the

Salmon, and the Selway Rivers in Idaho and the Poudre River in Colorado. We would be happy to consult with you on this matter.

The sentence on 2-18 is deleted because it was not appropriate to the subject being discussed. A clarifying paragraph on this management concern is added on page 2-36 where future management is discussed.

We agree with your findings that the dewatered stretches of the river are inellegible for inclusion in the system. We request you include, in the final version of this report, some data on the costs of restoring water to the two reaches in question. It might be possible for the Colorado Division of Wildlife to bypass some of the water in the Lafont ditches and restore the stream at no cost whatever. Since the Division of Wildlife is actively involved with the Denver Water Board in other such bypasses, we expect they will enthusiastically support the idea of doing so in their own case. The private ditch would be more expensive to acquire, but we cannot tell from your report how much more expensive it would be. We hope the final version of the statement will include a discussion of these matters. You are technically required to make such a discussion only if you are finding a reach should be included when that reach is dewatered, but we think that a discussion of the costs and environmental effects of revivifying these two reaches is necessary in the report.

The study team made a review of water acquisition costs throughout the State of Colorado. In 1977, the cost of new water varied from \$50 per acre foot up to \$17,000 per acre foot depending upon the use of the water and the particular source of the water.

We have discussed the Lafont waters with the State. The State's water provides much public benefit through its use for fisheries and wildlife in the Rio Grande Basin. We do not believe using this source of water for establishing the free flowing character of the Piedra can be justified. According to figures of the Colorado Division of Wildlife, the diverted waters generate approximately 18,000 recreation visitor days. Assuming a 9% increase of stream related activities reported on the San Juan, we estimate that 700 visitor days could occur each year on the dewatered segments.

We appreciate the opportunity to review this report. We support, with the reservations above, the position taken by the Forest Service and State of Colorado on recommending the Piedra be added to the National Wild and Scenic River System, and hope Congress and the President will concur.

Sincerely yours,

Ben Harding

Conservation Chairman
Colorado White Water Association

4 June '79
713 NW 75th Ave.
Gainesville, FL 32601

P.C. Sweetland
Forest Supervisor
San Juan NF
701 Camino del Rio
Durango CO 81301

Dear Mr. Sweetland,

Thank you for the opportunity to review the Piedra River study DES. It stands out for the exceptional quality of the job and objectivity of the study team and DES authors.

As you know the Piedra is a rare gem among American rivers. Wild for much of its length it offers unexcelled opportunities for fishing and boating. Were it here in Florida it would be ~~at least a National Park~~ ~~at least a National Park~~. ~~at least a National Park~~ In any state it is outstandingly remarkable. I commend you on your courageous recommendation of full protection for the entire study segment.

You will next be faced with an excellent opportunity to disprove the hysterical critics in Pagosa etc. who predict that the landowners will be ruined for design. You will serve and river and the agency if you can do an excellent job acquiring the easements painlessly. I'm sure you can.

Best wishes,
Gordon Rodda

943 County Road 204
Durango, Colorado 81301
June 5, 1979

Forest Supervisor, San Juan National Forest
701 Camino del Rio
Durango, Colorado 81301

Dear Sir:

I am writing in support of Forest Service Alternative One for the Piedra River.

I am disappointed that there are so many people in this area who want to develop every acre of ground and then move to: but don't put them only to respect the stream. Very soon, there will remain no place to go which isn't motorized and polluted.

/s/over sincerely,

Donald C. Spencer

Member, National Academy of Sciences

416 N. 8th
Aspen, Co 81611
June 5, 1979

Dear Mr Sweetland,

I am writing to express my support for the inclusion of the Piedra River in the National Wild and Scenic Rivers System. I recently have purchased residential property in Ouray and I am most concerned that the wild character of the San Juan be preserved to protect wildlife as well as downstream industry - much of which is dependent on scenic wild lands. Please include my statement of support in the comments on the draft EIS concerning the Piedra River.

Thank you.

Sincerely,

Karla VanderZanden
Karla VanderZanden



ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED
DATE 01-11-2001 BY 60322 UCBAW/STP

June 6, 1979

Mr. Paul Sweetland
Forest Supervisor
SAN JUAN NATIONAL FOREST
701 Camino Del Rio
Durango CO 81301

Dear Mr. Sweetland:

I would like to add my voice to those who are in support of your recommendation for Wild and Scenic River Status for the Piedra River.

Over the last twenty odd years, I have had the opportunity to hike and fish the Piedra in the subject section and can think of only one or two other rivers which are as deserving of Wild River Status.

I commend your selection and give my overwhelming support to the Piedra's proposed Wild River Status.

Thank you,

R. P. Van Dykenbeek

R. P. Van Dykenbeek
Vice President
Marketing

RPV/ps

CC: The Honorable Patricia Schroeder
The Honorable William L. Armstrong
The Honorable Gary Hart
Mr. Harris Sherman

2004 SW Dewitt
Portland, Ore. 97201

Paul Sweetland, Forest Supervisor
San Juan National Forest
701 Camino del Rio
Durango, Colo. 81301

Dear Mr. Sweetland,

I am very pleased to learn of the Forest Service's proposal to Wild and Scenic River status for the Piedra. It is especially important that the rich and diverse wildlife and fishery values of the river and its environs be maximally protected. You are to be commended for your support of the proposal. Thank you - and

Sincerely yours,

John L. Hammond

2629 N. Shields
Ft. Collins, Colorado
80524

June 10, 1979

Forest Supervisor
San Juan National Forest
701 Camino del Rio
Durango, Colorado - 81301

Dear Sir:

I am writing to you in regard to the Draft Environmental Statement on the Piedra Wild and Scenic River Study.

The Piedra River above Highway 160 is as pristine as any river system left in the state of Colorado. Its significance comes from the large number of elk and mule deer, the presence of peregrine falcons and other raptors in the river valley, the wild, undammed river flowing thru a largely uncut, intact forest ecosystem and the Piedra's aesthetic beauty and scenery. This river, which also has great potential for white-water recreation in its spectacular canyons, deserves protection in its Wild & Scenic Rivers Act.

I strongly endorse the Forest Service proposed alternative I which classifies the Piedra R. at the most restrictive level for segment eligibility. The Piedra River deserves such protection as a representative example of a river and ecosystem now becoming all too rare in this country. Alternative I also complements the Piedra Roadless Plan Wilderness Proposal sent to Congress which I also endorse. The DES and study of the Piedra were very good.

Respectfully,
Thomas Hornig

Tres Piedras Ranch
Chimney Rock, CO
June 11, 1979

Mr. Walter D. Werner
San Juan National Forest
701 Camino Del Rio
Durango, CO 81301

RE: Piedra River Wild and Scenic Rivers Act

Mr. Werner:

As an owner of property on the Piedra River in an area that you have recommended as "recreational" I would like to make the following comments:

a.) I am deeply concerned about what will happen to our property if a scenic easement through our land is asked for and eventually granted. There is no protection for our buildings, equipment, livestock, and personal belongings when anyone that wants to can walk through our area at will. Past experience shows that similar easements have had a very negative effect on the ability of property owners to protect what they have.



Law enforcement and patrol of private lands involved in easements are authorized through the cooperative law enforcement agreements the Forest Service has entered into with counties. Cooperative law enforcement is the responsibility of both the Forest Service and the Sheriff's Departments. The management plan for the river will address this concern.



b.) Why is it necessary for an easement when a perfectly good and useable road exists on the eastern boarder of our property. It appears that an easement would parallel this road through our entire area.



Scenic easements are acquired to control land uses on private lands that could be detrimental to the values for which the river is added to the national system. Public access provisions may be made a part of these easements. Each tract of private land will be examined in greater detail to determine easement needs during formulation of the river management plan.



c.) I do not agree that a designation of the Piedra River as a Wild Scenic River is in the best interest of those who would want to use it or would like to see it protected from overuse. Practically the entire land area under consideration is already under Forest Service control. What development that might occur on the small amount of private land must be weighed against the potential continued overuse of the area after designation. For the long term protection of this unique and beautiful area I believe it is best to leave this river area as it is now without designation.

Sincerely,

Robert W. Willard
Tres Piedras Ranch
Chimney Rock, CO



Indian Peaks Group of the Sierra Club



Martin E. Walters
3333 Noble Rd. JSR
Boulder, Colo. 80302
June 11, 1979

Paul Sweetland
Forest Supervisor
San Juan Nat'l Forest
701 Camino Del Rio
Durango, Colo 81301



Fremont Ecology

June 12, 1979

Paul Sweetland, Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, CO 81301

Dear Sir:

The Indian Peaks Section of the Sierra Club is an organization of more than 450 individuals and families in Boulder County, Colorado. One of the goals of our group is to work for the preservation of wilderness & wild rivers within the State of Colorado.

We understand that the Forest Service proposes to designate the Piedra River for inclusion in the National Wild & Scenic Rivers System. The location of this River and its importance to wildlife and fish habitat more than qualifies it for wild & scenic River status. The fact that Colorado is lacking in officially protected wild & scenic rivers makes it especially important that such status and protection be achieved for the Piedra. Therefore, we support the Forest Service recommendation to designate the Piedra as a wild & Scenic River.


Thank you for the opportunity to state our position. We ask that these comments be added to the draft environmental statement regarding the Piedra.

Sincerely yours,
Martin E. Walters, co-chairman

For the Draft Environmental Statement - Piedra River, Colorado

We strongly support the joint recommendation by the U.S. Forest Service and the Colorado Department of Natural Resources for the inclusion of the Piedra River in the National Wild and Scenic Rivers System.

Sincerely,


Marcy Kelly
Fremont Ecology

Neil J. Numark
University of Colorado
Wilderness Study Group
780 34th St.
Boulder, CO 80303

June 12, 1979

Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, CO 81301

Dear Sir,
Classifications as recommended under Alternative Plan I of the Piedra River Environmental Impact Statement are in strong agreement with the recommendations of the C.U. Wilderness Study Group, with one exception.

We are strongly convinced that the lower segment of the Piedra Mainstem-- from Highway 160 to Indian Creek-- is eligible for scenic classification; Plan I would unfortunately be less protective of the area, designating it recreational.

Roads in this segment are for the most part distant from the river. Furthermore, only 2 bridges and 5 dwellings are present over the 5.5 mile stretch. Considering the noteworthy attributes of the area, these improvements should not preclude scenic classification. A comparison with the river's middle segment-- which was recommended in the EIS for scenic designation-- is important. That 12.9 mile stretch has a total of 2/5 miles of shoreline roads, or approximately 3%, whereas the lower segment has 2/7 miles, for 5% accessibility. Ratios of segment length to number of diversions, commercial buildings, or recreational sites is about equal for both segments. The 2 segments appear equally worthy of scenic classification.

Our Findings are based on the criteria for Recreational River Areas on pages 10 and 11 of the GUIDELINES FOR EVALUATING WILD, SCENIC AND RECREATIONAL RIVER AREAS PROPOSED FOR INCLUSION IN THE NATIONAL WILD AND SCENIC RIVERS SYSTEM UNDER SECTION 2, PUBLIC LAW 90-542, adopted by the Secretaries of Interior and Agriculture, February 1970. The statistics of developed are appreciated, however, we believe the evaluation must go beyond the statistics and address the affects of the developments with regard to the criteria.

The river in the lower segment is paralleled by roads on each side which are visible from the river in many locations and nearly all of the lower two miles of the segment. The roads crossing the river corridor in the scenic segments generally enter the river corridor, cross the river, thence leave the corridor. The only exception is FDR 636 which parallels the Middle Fork, but is only visible from the river in four or five short reaches.

there are eight water diversions in the scenic segment to only six in the lower segment. However, the effects of the diversion structures and attendant ditches are less on the upper ditches than in the recreational segment. Generally the upper ditches have a headgate and then the ditches leave the river on contour. The Thompson ditch in the lower segment has a head gate and then the ditch parallels the river on a grade that has required impactive cuts and fills along the river. The Don Thompson pumping stations also impact the river from a noise standpoint as well as visually.

The lower segment passes through an unincorporated community with several commercial buildings including a post office, store, filling station and resort cabins. We are unaware of any commercial establishments in the scenic segment except for the Notch Guest Ranch which is located in the river segment found to be ineligible.

The Forest Service Campground on the lower segment is much larger than the Piedra picnic area on the upper segment thus attracting greater activity in the recreational segment.

Our study evaluations were made on the existence of structures, facilities, or uses and their affect on the river and its environment.



Finally, nothing in the Wild and Scenic River legislation indicates that the Lower Piedra need be less protected than with scenic designation. Even if there are interests to retain more favorable employment opportunities in the form of timber harvesting, the lower segment is indeed a scenic river, and the advantages of designation as such would seem to outweigh economic benefits of recreational classification. This modification-- combined with other specifications of Plan I-- appears to us to be the best road to follow.

Respectfully submitted,

Neil J. Numark,
University of Colorado
Wilderness Study Group



Sierra Club

Rocky Mountain Chapter

...TO EXPLORE, ENJOY AND PRESERVE THE NATION'S
FORESTS, WATERS, WILDLIFE AND WILDERNESS...

June 12, 1979

Mr. Paul Sweetland
Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, Colorado 81301

Dear Mr. Sweetland:

The Rocky Mountain Chapter of the Sierra Club, representing over 3000 members in Colorado, endorses your recommendation of protection of the Piedra River in the National Wild and Scenic River System. The alternative for designation of 32.5 miles as "wild" river, 12.5 miles as "scenic" river, and 5.5 miles as "recreational" river is necessary to protect the valuable wildlife habitat of the area and the Piedra's free-flowing character. Protection of that habitat for game, non-game and fish species is of greater value than the slight negative economic impacts that might result.

We support your choice of alternatives and urge that it be your final recommendation to Congress.

Respectfully,

Connally Mears

Connally Mears
Wilderness Coordinator
Rocky Mountain Chapter
of the Sierra Club

4748 S. Washington
Englewood, Co. 80110
June 13, 1979

Paul Sweetland, Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, Co. 81301

Dear Mr. Sweetland:

Please make these comments a part of the record on the draft environmental impact statement and proposal to classify some 50 miles of the Piedra in Colorado as a National Wild and Scenic River.

You and your staff deserve to be complimented for an excellent job done on the environmental statement.

Moreover, I strongly support your plan to classify and protect the Piedra. At present, not a single mile of Colorado's famed rivers have wild and scenic river protection. The Piedra River possesses outstanding scenic and recreational qualities. It is a very good river for trout fishing. It in every way warrants permanent protection as one of Colorado's finest wild and scenic rivers.

The protective designation for the river would enhance the Weminuche Wilderness from which it drains.

I urge you to include the 50 odd miles in your final environmental statement and recommendation for wild and scenic river classification.

With best wishes,

Clifton R. Heritt

Clifton R. Heritt

29952 Dorsey Road
Evergreen, Colorado 80439
June 13, 1979

Mr. Paul Sweetland, Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, Colorado 81301

Dear Mr. Sweetland:

This is to comment on your draft proposal to designate
52.5 miles of the Piedra River for National Wild and Scenic
River status.

I am familiar with the Piedra River area and have only so much
in your good recommendation to protect the outstanding scenic
and recreational values of this free-flowing river.

This designation will complement the magnificent volcanic
wilderness and safeguard the important trout fisheries
which are endangered in so many parts of the state.

Please include this letter in the official environmental
statement record.

Sincerely,

William Lind Ramsey
William Lind Ramsey

June 13, 1979

Paul Sweetland
Forest Supervisor
San Juan National Forest
701 Camino Del Rio
Durango, Colorado 81301

Dear Mr. Sweetland:

I would like to lend my support to all efforts geared to making the Piedra River
a part of the National Wild and Scenic Rivers System.

The Piedra provides an area of habitat for the peregrine falcon, an endangered
species, and eagles.

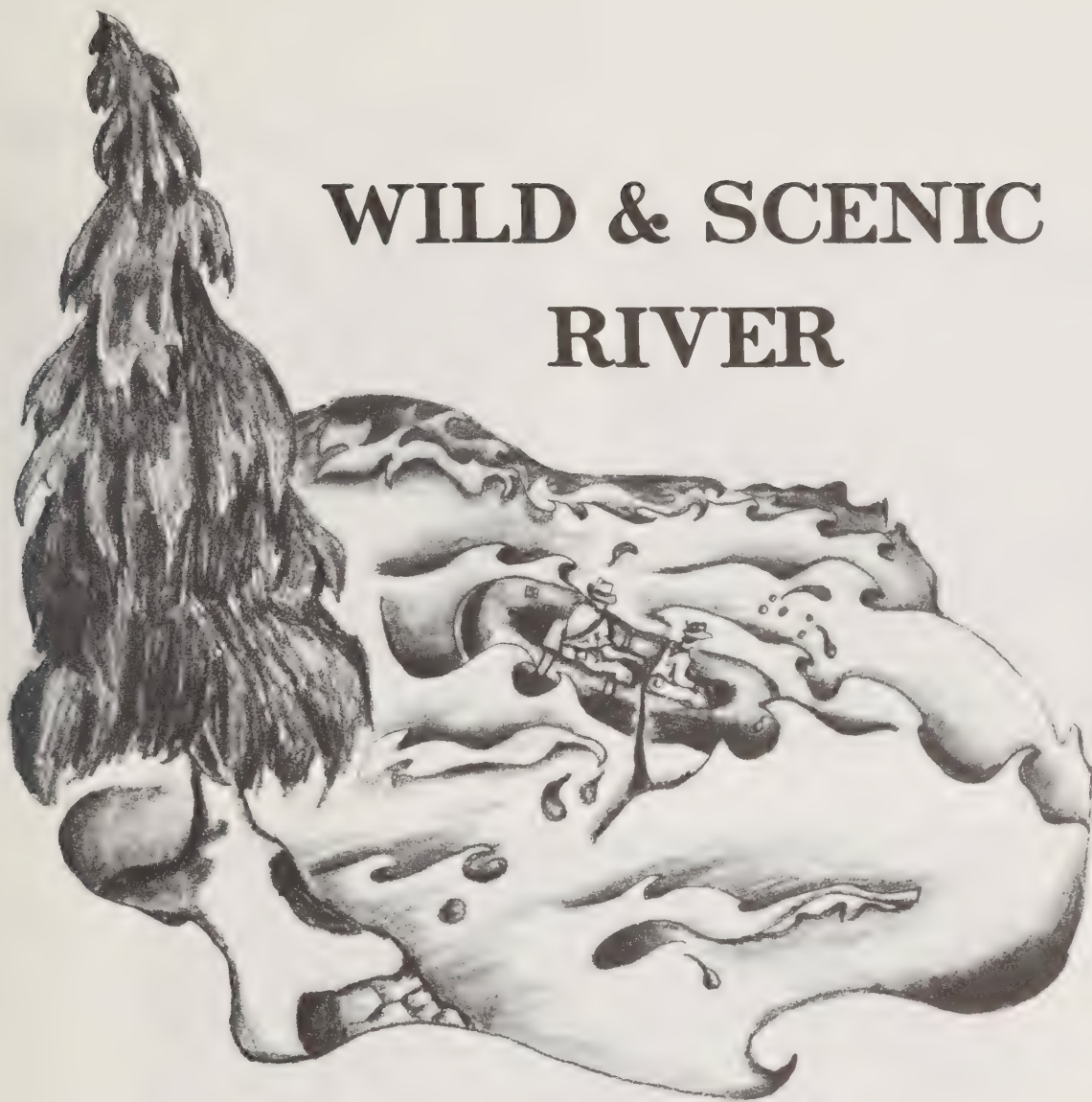
We need to preserve this -- it is an important part of America's wild lands and
free-flowing rivers.

Thank you.

Sincerely,

Bobbie L. Ruth
Bobbie L. Ruth

WILD & SCENIC RIVER



STUDY REPORT

INTRODUCTION

I



3

- 1) Piedra Falls on the East Fork.
- 2) Piedra River Trail crossing at Williams Creek.
- 3) State Division of Wildlife fish sampling crew making studies of the Piedra River.

1. INTRODUCTION

A. BACKGROUND

The Wild and Scenic Rivers Act, P.L. 90-542 became law on October 2, 1968. It preserves "certain selected rivers" that "possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values" in their free flowing condition for the benefit and enjoyment of present and future generations. The Act named eight rivers as initial components of the National Wild and Scenic Rivers System and listed 27 others as potential additions. A procedure was framed for assessing their worth as additions to the national system.

On January 3, 1975, P.L. 93-621 became law. It amended the 1968 Act by naming 29 other rivers for study. Twelve of these rivers are in Colorado. Among these was, "Piedra, Colorado: The Middle Fork and East Fork from their sources to their confluence, thence the Piedra to its junction with Colorado Highway 160, including the tributaries and headwaters on National Forest lands".

While the study was underway, P.L. 94-486 was enacted October 12, 1976. This amendment to the Wild and Scenic Rivers Act, among other actions, reduced the Piedra study area by striking the phrase "including the tributaries and headwaters on National Forest lands".

In the spring of 1976 the Federal/State study team was formed to carry out the study. The study proceeded in four basic steps. The first step was data collection, disseminate public information and determination of river eligibility. During the second step the team then determined suitability for potential classification for each stream segment. The third step, including public workshops, was to formulate and analyze alternative plans for Congress to consider. The last step was to evaluate the alternatives and select a recommended plan. Each step had active public involvement with formal public meetings held early in the study.

B. THE STUDY SETTING

The study setting is within the Piedra Valley located in southwestern Colorado. The Piedra River is a tributary of the San Juan River, the southernmost tributary drainage basin of the Upper Colorado River basin. The Piedra River above the lower study terminus (Colorado Highway 160) drains approximately 371 square miles. Twenty-eight percent of the valley is classified as wilderness (Weminuche Wilderness). The lower portion of the area being studied (approximately 170.3 thousand acres) is within the Piedra District of the San Juan National Forest.

C. REGIONAL DESCRIPTION

The Piedra River is located in the "Four Corners" area of Colorado. This area provides the contrast of the southwest desert lands meeting with the high Colorado Rocky Mountains. Back-dropped against the vast stretch of mesas, canyons, and rolling land form is the massif of the San Juan Mountains. The region affected by this study is the Piedra river basin and associated land areas and nearby communities; best described as the northeastern portion of the Colorado quadrant of the "Four Corners" area.

Geology in the Piedra River Valley includes rock and formations from the Precambrian period, forward in time to the Quaternary. Geologic processes alternated among periods of uplifts, depressions, volcanic activity and erosion. The last major land building activities were the Potosi and Fisher volcanic series. Erosion during the Quaternary period provided the character of the Piedra River terraces. ^{1/}

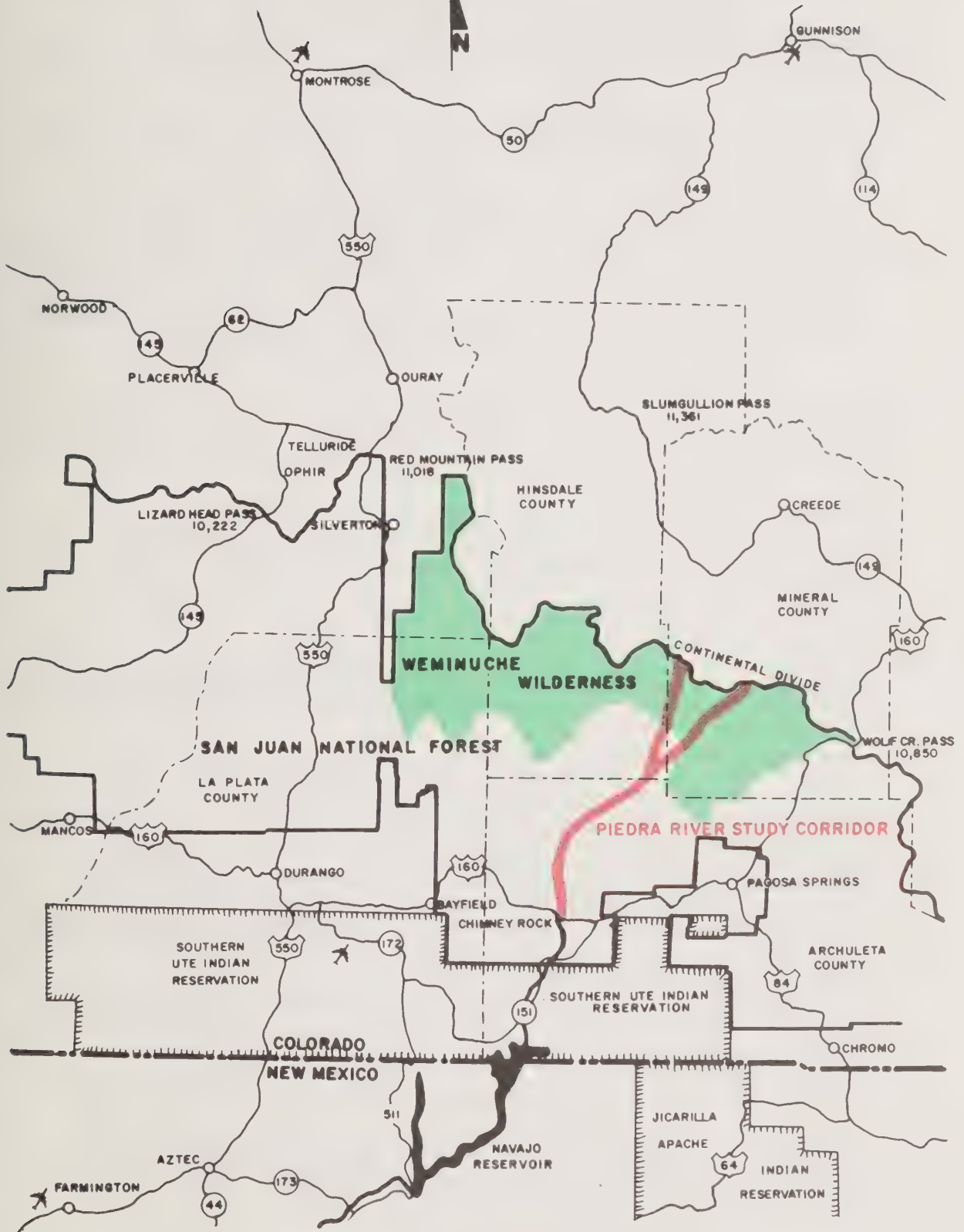
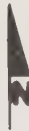
The general climate of the valley is short, cool summers and long, wet winters. The sky is generally clear and the sunshine is brighter than at lower elevations. The summer nights are always cool. The frost-free period varies from 48 to 100 days, depending on elevation, but frost has been observed every month in the high mountains of the region.

At all elevations June is commonly the driest month. In the lower elevations of the region, most moisture comes from rain during the period from late July through early September. Elevations above 10,000 feet receive an average annual precipitation of 40 inches, mostly from snow. At the lower elevations the mean average annual precipitation is 10 to 20 inches. Aside from the normal variations of wind pattern and ridge/valley temperature differentials, two beneficial weather patterns can be expected from the influence of mountains surrounding the Piedra Valley. Canadian arctic fronts seldom break over the Continental Divide, sparing the valley from the frigid blasts experienced in the high plains and along the east slope of the Rocky Mountains. Also, cooling of wet air masses moving in from the Pacific contribute moisture to the region when they are lifted over the Continental Divide. These two weather patterns are the climate's most important contribution to the region's vegetative character.

^{1/} Larsen, Esper S. and Whitman Cross, Geology and Petrology of the San Juan Region Southwestern Colorado, 1956, USDI-Geologic Survey, Professional Paper 258, pp. 1-11.

PIEDRA WILD AND SCENIC RIVER STUDY

SCALE 1" = 15 MI.



The Piedra River and its tributaries are a productive watershed. Geologic Survey gage #3495 on the Piedra River near the Colorado Highway 160 bridge registered an annual average discharge of 223,900 acre-feet of water for 1940-72 ^{2/} (see Appendix C). Waters of the Piedra are used primarily for agriculture. Irrigated pasture is the mainstay of the local agriculture economic sector. With exception of the Don LaFont transcontinental diversions, belonging to the State Division of Wildlife, all direct water appropriations are for irrigation.

The Piedra mainstem has 30.8 cubic feet per second (cfs) decreed in absolute and 6 cfs under conditional decree. Twenty-four and 5/10 cfs are decreed from the Middle Fork. The East Fork has absolute decrees amounting to 65 cfs with an additional 50 cfs under conditional decree (see Appendix C).

Visually, the quality of air is fairly high. Occasional burning in the forest and dusty roads lower visual air qualities; however, these are transitory. Air quality monitoring studies have not been conducted in the Piedra Valley.

The varied soils, exposure and elevational effects on climate have produced 15 major vegetative types or associations. In the Piedra drainage there are grasses (both wet and dry), spruce, fir, mixed conifers, aspen, Ponderosa pine, oakbrush and alpine grasses. The river corridor contains 16 of the 48 ELU's found in the Piedra Valley. These ELU's, which are permutations of land form, soils and vegetative types, are determined for only the non-wilderness segments of the river valley.

As part of the Piedra wild and scenic river study, the Colorado State Division of Wildlife made a terrestrial wildlife inventory report. Wildlife in the Piedra basin is typical of the entire San Juan National Forest, well known for its populations of mule deer, elk and bear.

The Peregrine falcon, a bird on the Federal Endangered Species list, uses a portion of the region for hunting. Although no aeries have been found in the river corridor, reliable observations have been made of hunting falcons in some of the upper valleys and canyons of the Piedra River. Abert's squirrel also holds a unique position in the animal populations of the region. This squirrel, recognizable by its tufted ears, has the distinction of life association almost entirely with a single plant species; Ponderosa pine. ^{3/}

Since the Piedra quickly traverses four life zones, fisheries of the region are diverse. The region's rivers and lakes provide habitat for 20 known cold and warm water species. Most of these species are warm water fish inhabiting Navajo Reservoir below the river study area. The portion of the river being studied was electrofished in 1976. Species found were rainbow, brook, cutthroat and brown trout, dace, mottled sculpin, kokanee salmon, bullhead catfish, and blueheaded and whiteheaded suckers.

D. HISTORY OF DEVELOPMENT

The Piedra River (Spanish for "rock") originates in the southwestern San Juan Mountains, flowing southwesterly into New Mexico. The river valley is sparsely populated and has never been developed by any settlements other than the tiny hamlet of Piedra (now called Chimney Rock) and the Arboles railroad station.

The Spanish Empire in North America (1519-1821) extended into the region, but little attempt was made at settling as far north as the upper Piedra Valley. Various expeditions to explore or to punish marauding Indians gave enduring names to the region. Two Spanish padres, Escalante and Dominguez, traveled to the California missions but did not record the Piedra Valley. In 1694, Don Diego de Vargas traveled due north from Santa Fe, crossing the San Luis Valley from the south. The route continued to the Grand Junction area, intersecting the route of the padres in east central Utah. These two routes became known as the Old Spanish Trail and were used extensively by the fur trappers and traders out of Taos in the early 1800's. By these routes, they were able to reach the Colorado and Green River basins. Both routes bypassed the Piedra country although the trappers covered most of the intervening country, trapping on nearly every worthwhile stream in Colorado. Unfortunately, the trappers left little written record of their travels.

The Piedra country remained unsettled and in Spanish control until Mexican independence in 1821. The Mexican government attempted to settle their northern frontier by means of the land grant system which included the Tierra Amarilla Grant (1832) and the Conejos Grant (1833).

^{2/} USDI-Geological Survey, Water Resources Data For Colorado, Part I, Surface Water Records, 1973.

^{3/} Patton, David R., Managing Southwestern Ponderosa Pine for the Abert Squirrel, May 1977, Journal of Forestry, Vol. 75/Number 5, pp. 265-267, and Keith, J.O., The Abert Squirrel and Its Dependence on Ponderosa Pine, 1965, Ecology 46:150-163.

These large land tracts lay to the east of present-day Pagosa Springs, but were not settled because of Ute and Jicarilla Apache problems. Ownership of the entire region passed to the United States as a result of the Mexican War and the ensuing Treaty of Guadalupe Hidalgo in 1848.

By 1863, Indian agencies for the Southern Utes had been established. Continuing Anglo expansion and the gold fever produced a clamor for the subjugation of the various Ute bands. In 1868, a large reservation was created out of the western third of the present Colorado border. The eastern boundary was a line that roughly ran through Pagosa Springs, up to a point south of present day Steamboat Springs. The line then ran due west to the Colorado-Utah border; hence, the Piedra country became part of the Ute Indian Reservation.

Silver discoveries in the San Juan Mountains soon made the Ute lands a desirable commodity. This led to the Brunot Treaty of 1873 in which the Utes gave up most of the lands now comprising San Miguel, Dolores, Montezuma, La Plata, Archuleta, Ouray, Hinsdale and San Juan counties. A strip of land along the Colorado-New Mexico border, about 15 miles wide and 100 miles long, was set aside for the Southern Utes.

The Brunot Treaty was so often broken by the Anglos who trespassed on reservation lands that the United States government feared Indian reprisals. As a result, the U.S. Army constructed Ft. Lewis near the site of Pagosa Springs in 1878 to maintain peace. The Pagosa Hot Springs nearby had been discovered in July, 1859, by a military expedition commanded by J. N. Macomb, Captain of the Topographical Engineer Corps. Since curative powers were attributed to such springs in the last century, great value was placed on them and the army set aside one square mile around these springs as a townsite. Streets were laid out in 1880 and Pagosa Springs was incorporated in 1891.

The wagon road connecting Ft. Lewis with Ft. Garland on the eastern side of the San Luis Valley was extended to Animas City on the west (which was later absorbed by Durango). The tiny village of Piedra, at the crossing of the road and the Piedra River, was little more than a post office and a ranch used as a stage stop. The few settlers in the area engaged in raising sheep and cattle, as the mineral resources of the Piedra Valley were limited and did not attract the hordes of gold seekers.

When the Denver and Rio Grande Railroad built its San Juan Extension in 1880-1881, it passed south of the upper Piedra Valley. The town of Arboles was created at this time as a stop along the narrow gauge route to Durango and Silverton. Pagosa Springs did not receive direct rail service until construction of a spur line from Pagosa Junction in 1900.

Concentrated lumbering did not begin until 1899 when the Pagosa Lumber Company was incorporated. The main sawmill was located at Pagosa Junction in 1900, and in 1903 an additional mill was built at Dyke (named after William Dyke, a nearby rancher). In 1905, a new mill was built in Pagosa Springs, to work the forests north and south. By 1916, most available timber had been cut and the South Pagosa Mill dismantled. The era of the logging railroad was short-lived (1900-16) and never repeated, although sawmills have existed in and around Pagosa Springs to the present day. Areas cut over and exploited by the railroad logging were generally south and east of the river corridor.

In spite of several periods of historic development, the Piedra River corridor generally escaped development except for livestock grazing.

E. CURRENT SOCIAL AND ECONOMIC OVERVIEW

The upper Piedra Valley in Mineral County has no year-long residents. One seasonal guest ranch is operated in this remote portion of Mineral County, but its trade and promotion are related to Pagosa Springs. A portion of Hinsdale County has a somewhat similar circumstance. There are 10 to 12 families which live year-long in the part of the Piedra in that county. Their trade, mail, schooling and community activities are also centered in Pagosa Springs.

Social and economic data for the isolated portions of Mineral and Hinsdale counties are almost impossible to develop. Since the trade and economic base of these scattered residences is tied directly to Pagosa Springs and Archuleta County, this plan considers the three counties as a single entity, hereinafter referred to as the County or Archuleta County.

The County is rural, with an economic base provided by tourism, lumbering and agriculture. The desire to live in the beautiful environment has attracted people who, first possibly as tourists, relocated and grew with the region. Tourism, to a lesser extent, also provides jobs when they come to locate. ^{4/} In-migration can be expected to continue in spite of chronic unemployment as long as people can find a way to earn a living or the general economy allows the opportunity for second homes.

^{4/} Hayes, Vicki L., A Social-Economic Profile of the San Juan Basin, 1974, USDI-Bureau of Land Management San Juan Area Office and Western Interstate Commission for Higher Education, pp. 6-23.

In the past seven years, even though total population has risen, the work force has declined about 10 percent. This could partly be explained by the increase in retired persons living in the County. Another contributing factor is the number of persons employed outside the county. ^{5/} A varying unemployment rate of 8.8 percent and 11.1 percent annually indicates a definite need to increase employment opportunity. Tables I through II compare populations and unemployment in the area.

TABLE I
Population of Archuleta County
and County Seat

<u>Year</u>	<u>Population Archuleta</u>	<u>Population Pagosa Springs</u>
1950	3030	1379
1960	2629	1347
1970	2733	1360
1977	3536	1336
<u>Projected</u>		
1980	5000	1665
1990	6500	3000
2000	7500	3500

Source: USDA-Bureau of Census, Projections by County Planner.

TABLE II
Monthly Unemployment Fluctuations for Archuleta
County for Sample Years 1972 and 1975
(Percent rate of unemployment)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
1975	17.9	23.9	20.0	20.3	13.6	9.6	9.1	7.3	5.8	7.5	8.0	10.1
1976	13.4	12.1	13.9	9.5	7.6	6.4	6.0	7.1	4.9	5.1	7.6	12.5
1977	11.4	21.0	20.7	16.7	11.3	11.4	10.4	9.8	9.2	12.8	14.5	18.5
1978	23.8	23.7	26.0	25.3	30.0	22.4	17.9					

Source: Colorado Division of Employment

Timber and sawmill operations continue to be the economic mainstay in the County; ranching also makes significant contributions to the economic base. Hay is the only field crop that adds to the agriculture portion of the economy. But, in recent years, both hay and cattle production are decreasing (Ibid ⁵ pp. 7-12). Tourism and recreation as components of the County's economic base indicate an upward trend. The resource systems that affect the economy are discussed in detail in Chapters II and III in the Environmental Impact Statement.

Several needs and attitudes were expressed by the local public during both the information meeting and the alternative workshop. With a few dissenting opinions, the general attitudes expressed were:

- Recreation and tourism growth are seen desirable and inevitable, but the growth should be controlled to prevent environmental degradation in the river drainage.
- The Forest Service (Federal government) should continue timber sales to aid the county road and school activities through the 25 percent fund.
- County economic growth is seen as desirable.
- Changes in the economic component balance are seen as inevitable, but they should be gradual.

F. TRANSPORTATION

Colorado Highway 160 provides the major east-west route into the area. Between Pagosa Springs and Utah, Highway 160 intersects with north-south Colorado Highways 84, 550 and Utah 660.

^{5/} Lucyk, Philip J., Economic Inventory Archuleta County Colorado, 1976, Upper San Juan Regional Planning Commission and Western Interstate Commission for Higher Education, pp. 12-19.

Air service to Durango, Colorado and Farmington, New Mexico, together with bus service, link the area to all major cities in the United States. There is no through rail service.

The river corridor is served by two main Forest Development Roads leading off Colorado Highway 160. The First Fork Road (FDR 632) leaves Highway 160 near the Chimney Rock store at the southern end of the corridor. The Piedra Road (FDR 631) serves the Upper Piedra Valley. It leaves Highway 160 near Pagosa Springs, crossing the Piedra River approximately two miles below the confluence of the Forks. There are also roads serving the East and Middle Forks (see Appendix D).

Trails, stock driveways, or unconstructed fisherman routes are found along the entire length of the river. Only in the First and Second Box Canyons are these trails any appreciable distance from the river bed. Each trail is served by a road access point. These points are widely distributed and provide access to all portions of the river within a 4-5 hour walking distance. Only the wilderness segments lack this convenient access.

THE RIVER CORRIDOR

II



1



2



3

- 1) Piedra Falls
- 2) Beginning of Rat Trap rapid in First Box Canyon.
- 3) Rafters entering rapids in Second Box Canyon.



1



2



3

- 1) Davis Creek rapid in Second Box Canyon.
- 2) Cliffs above Spruce Creek's confluence with the East Fork.
- 3) Piedra Falls Ditch and headgate.



1



2



3

- 1) Snare rapid above Second Box Canyon.
- 2) Dilema rapid in First Box Canyon.
- 3) Rocks of Rattrap rapid in First Box Canyon.

II. THE RIVER CORRIDOR

The following description of the Piedra River and its corridor (about one-quarter mile wide from either bank) presents a closeup view of a potential Wild and Scenic River and the associated lands. Included is information on the various physical aspects of the river, its resources, their uses and existing or potential conflicts.

A. UPPER EAST FORK--SOURCE TO WEMINUCHE WILDERNESS BOUNDARY (MAP #II)

Headwaters Area (2.5 miles)

The East Fork rises over 12,000 feet along the Continental Divide. Rivulets dropping from higher peaks to the valley floor combine to form the river's first definable channel. This basin, located in classified wilderness, historically has been used for livestock grazing, recreation and water development.

The highest reaches of the East Fork are devoid of trees except for occasional Limber Pine which offers protection from wind and rain for wildlife and the hardy hiker. It is a region of steep rocky slopes, sheer rock cliffs and many talus slopes inhabited by pika, marmot and ptarmigan. Big game animals such as elk, deer, bear and bighorn sheep pasture the area during the summer, but seek shelter of the lower valley in winter. This segment is the upper limit for fish because the stream becomes too small and unreliable to support anything other than the smallest of aquatic life.

At the valley head, two diversion ditches were constructed in 1938. These ditches, now owned by the Colorado Division of Wildlife, divert water from Colorado's western slope into the San Luis valley for wildlife and recreation. This diversion de-waters the upper portion of this segment.

The basin is accessible only by trail. Piedra Pass, at the top, is paralleled by trail and is an important junction for trail use.

Subalpine Segment (6 miles)

Here the East Fork varies from five to thirty feet wide. Water volume has increased enough to develop cutting power, carving a deep V-shaped valley as it cascades from 10,700 to 8,400 feet over boulders and waterfalls. The segment ends at the Weminuche Wilderness boundary, thundering over Piedra Falls for a drop exceeding 100 feet.

Game trails are the only paths traversing this segment. In several places during high water the adventurer has to scale cliffs rising out of the river bottom to get past narrow river channels; in low runoff periods the user must wade in the stream channel for passage.

The V-shaped valley provides summer range for elk and other big game with grassy areas providing excellent food and cover. Carex intermixed with willow and marshy bottomlands provide rearing areas for game animals.

The stream bottom is abruptly constricted near Dark Canyon. The intruding geologic formation forces vegetation higher up the valley sides. On the steep, unstable slopes aspen provide cover for numerous small animals and birds.

B. UPPER MIDDLE FORK--SOURCE TO WEMINUCHE WILDERNESS BOUNDARY (MAP #III)

Headwaters Area (4 miles)

Within a mile of the Continental Divide, seven unnamed streams, created by numerous rivulets above 11,000 feet, join to form the mainstream channel of the Middle Fork. The basin is characterized by potholes and wet meadows interspersed between steep slopes. The Krumholz zone (stunted and small wind-gnarled conifers) is found between the cliffs and wet areas. As with other alpine areas in the Weminuche Wilderness, historic uses include outdoor recreation and domestic livestock or wildlife grazing. This area is served by trail.

Subalpine Segment (5.3 miles)

From the convergence of the seven headwater streams, the Middle Fork drops from 10,000 feet to the Weminuche Wilderness boundary at approximately 8,600 feet. Much like the East Fork, the Middle Fork has carved a deep V-shaped valley. Upon reaching the volcanic intrusion of the Potosi series, the stream forces its way through a narrow cleft until it reaches the wilderness boundary. Vegetation and wildlife populations are similar to the East Fork.

No trail system is located along this segment; the hiker and fisherman must make their way up the stream bottom by scrambling over and around large boulders. During periods of high water the segment is impassable.

MAP#II
UPPER EAST FORK

CONTINENTAL DIVIDE
JUAN
RIO GRANDE N.F.
SAN JUAN N.F.
MOUNTAINS
Piedra Peak
Palomino Mtn
Gulch
Monument Lake
Window Lake
SUGARLOAF Mtn
PIEDRA RIVER TERRITOR
PIEDRA RIVER
HEAD WATERS
RED MOUNTAIN
Puerto Blanco
SUBALPINE
WILDERNESS
SAN JUAN
Upper Pourmule Lake
Cherry/Cairn
Pourmule Lake
Davis Mtn
Creek
Fork

2-12 PRIMITIVE

MAP#II
UPPER EAST FORK

CONTINENTAL DIVIDE
JUAN
RIO GRANDE N.F.
SAN JUAN N.F.
MOUNTAINS
Piedra Peak
Palomino Mtn
Gulch
Monument Lake
Window Lake
SUGARLOAF Mtn
PIEDRA RIVER TERRITOR
PIEDRA RIVER
HEAD WATERS
RED MOUNTAIN
Puerto Blanco
SUBALPINE
WILDERNESS
DAVIS Mtn
Cherry/Cairn
PRIMITIVE

MAP#II
UPPER EAST FORK

CONTINENTAL DIVIDE
JUAN
RIO GRANDE N.F.
SAN JUAN N.F.
MOUNTAINS
Piedra Peak
Palomino Mtn
Gulch
Monument Lake
Window Lake
SUGARLOAF Mtn
PIEDRA RIVER TERRITOR
PIEDRA RIVER
HEAD WATERS
RED MOUNTAIN
Puerto Blanco
SUBALPINE
WILDERNESS
DAVIS Mtn
Cherry/Cairn
PRIMITIVE



MAP#III

UPPER MIDDLE FORK

Palisade Meadows

SUBALPINE

HINSDALE CO
MINERAL CO

WILDERNESS

The Notch
Rock Mtn

Wainwright Spring

2+13

C. MIDDLE SEGMENT--WEMINUCHE WILDERNESS BOUNDARY ON BOTH FORKS TO THE CONFLUENCE (MAP #IV)

Lower East Fork Valley (6.5 miles)

Below Piedra Falls approximately nine miles from its source, the East Fork's gradient flattens. Outside the Weminuche Wilderness the stream channel is scoured by flooding and modified for water development projects. Only one-half mile below the falls, irrigation diversions dry the stream during most summer months. Below the point of diversion the stream slowly regains some of the lost water through return irrigation flows. The last 2-3 miles of the river valley contain numerous incised meanders.

This segment crosses private lands with only two short reaches on National Forest lands. No trails or roads are in the stream bottom, but roads on or crossing private lands provide access to the river at several locations. Grasslands interspersed with stands of conifers and lance-leaved cottonwood are common along the river. Historically, the lands have been used for livestock grazing, private outdoor recreation enterprise and, more recently, summer or second homesites.

This is a transition landscape, where spruce and fir give way to Douglas fir and Ponderosa pine, and where steep valley walls and cliffs give way between winter and summer ranges. In the stream, cutthroat and brook trout are replaced by rainbow and brown trout.

Lower Middle Fork Valley (8.9 miles)

Like the East Fork, the Middle Fork flows from the narrow wilderness canyon into the broad and open valley below the wilderness. The stream generally runs a straight southerly course while cutting deeper into unconsolidated soils and morainal materials. Incised meanders on the lower mile of this segment are identical to those of the East Fork.

With the exception of the last one and one-quarter mile of this reach, the stream is entirely on National Forest lands. Past uses of the surrounding land have been timber harvest, livestock grazing, water diversion for irrigation and outdoor recreation. The private lands near the confluence with the East Fork are ranch lands.

This segment is paralleled by a road. The road is far enough and high enough above the stream to be screened in all but six locations by intervening vegetation.

The ponderosa forests in this part of the valley are inhabited by some elk and other game animals during the winter. Many local residents claim the area used to be prime winter range with many deer and elk staying instead of migrating to the lower valleys near Pagosa Springs and Chimney Rock.

D. MAINSTEM--CONFLUENCE OF THE FORKS TO HIGHWAY 160 (MAPS V AND VI)

Piedra River Canyons (14.7 miles)

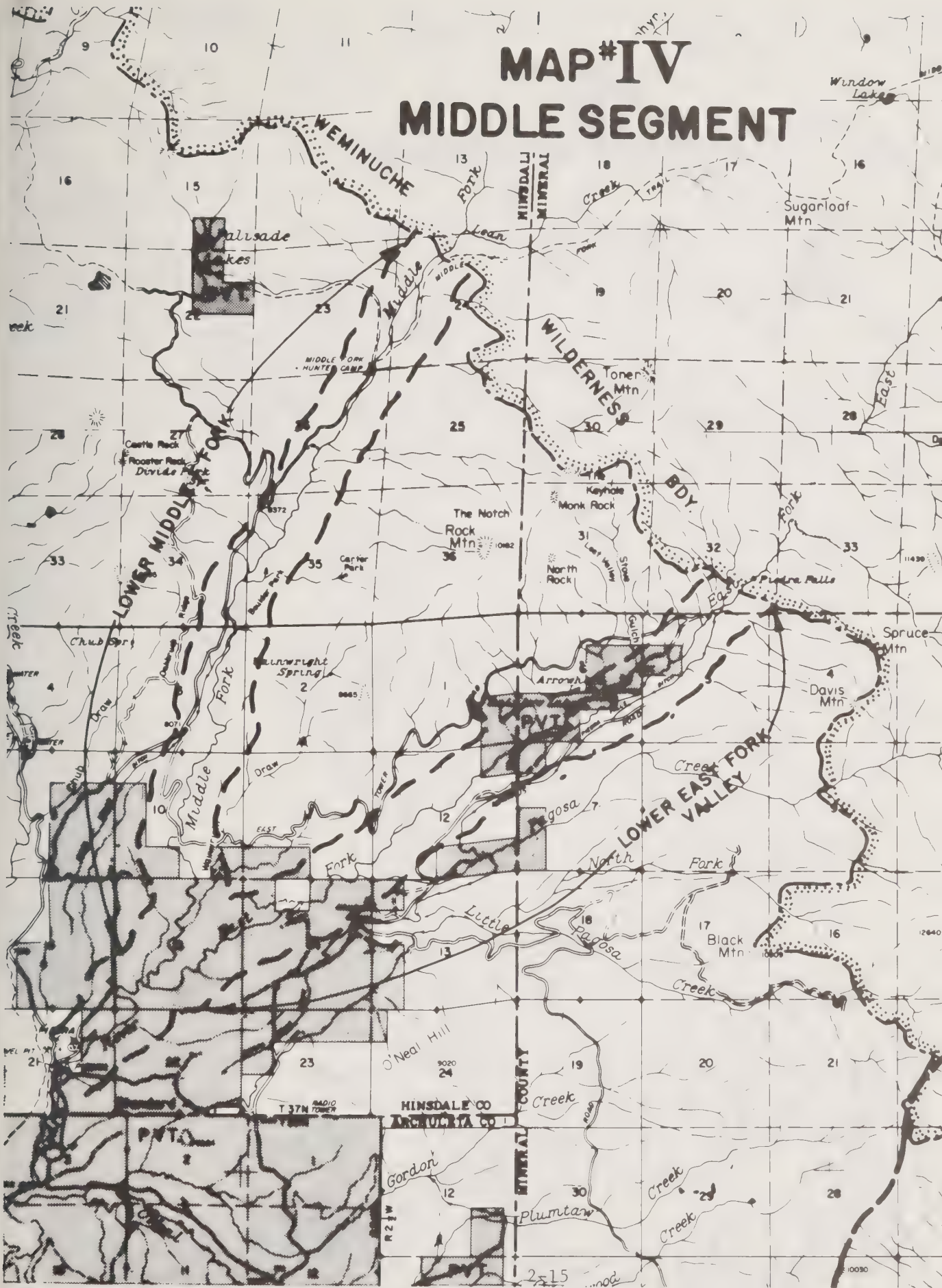
Where the East and Middle Forks merge the stream quickly loses its meandering character, beginning an alternate series of rushing cascades and slow, lazy twists on its course of cutting through the sedimentary rocks laid down during the Mesozoic Era. Approximately one and one-half miles below the confluence, FDR 631 crosses the Piedra River. Below the bridge the river flows into a narrow canyon, so narrow that a small waterfall drops into the center of the stream from overhanging cliffs. Immediately below this short segment, O'Neal Creek joins the Piedra in a southwesterly course which twists and caroms off vertical rock outcrops of the valley sides.

The water volume increases with the confluence of the side tributaries of Williams Creek, Weminuche Creek, Sand Creek and First Fork. The segment below the FDR 631 bridge is the first to attract white water boaters. After several miles in the open valley, the river enters Second Box Canyon. The Second and the First Box Canyon were formed where the river runs between two resistant pre-cambrian rock formations. The cutting power of the river has only been able to deepen rather than widen the canyons. The canyon is sheer vertical walled with three major rapids and numerous small rapids with very little slow water between them. Character of the rapids is best described by powerful holes (fast water churning behind large boulders), constricted channels with sharp bends against sheer walls, and hydraulic jumps created where water bounds over barely submerged boulders.

The valley opens somewhat at the confluence with First Fork but a short distance below the First Fork bridge the stream enters First Box Canyon. This canyon contains a series of continuous rapids for nearly two miles. Two of the rapids are extremely dangerous, cascading 4-10 feet over exposed rocks or against "truck-sized" boulders that constrict the channel; sheer cliffs at the waters' edge block simple portages. At the end of the chaos created by the First Box rapids, the stream runs swift until it reaches the last rapids at the confluences with Sheep and Indian Creeks.

MAP#IV

MIDDLE SEGMENT



MAP #V

PIEDRA MAINSTEM



MAP #VI
PIEDRA MAINSTEM

The map depicts the Piedra River Canyon and Lower River Valley. Key features include the Piedra River, various creeks (e.g., Sheep Creek, Horse Creek, Little Devil Creek), and mountains (e.g., Horse Mtn, Devil Mtn, Mule Mtn). A large area is labeled 'PVT' (Private Territory). The map includes a north arrow, a scale bar, and numerous place names and elevations. The title 'MAP #VI' is prominently displayed at the top right, and 'PIEDRA MAINSTEM' is below it.

A heavily used trail parallels the river from First Fork to the FDR 631 bridge. Only livestock and game trails serve the segment downstream from First Fork. The First Fork road parallels the river, but is so distant upslope that it has no effect on the stream environment until it crosses the First Fork bridge at the campground.

Ponderosa pine dominates this landscape segment, the edge of the critical big game winter range. Although some big game over-winter in the valleys above, many pass through this segment to reach the pinon-juniper areas below. The river in this segment contains all the fish species previously listed.

Historic uses in the segment are outdoor recreation, livestock grazing and wildlife. Timber harvest has occurred higher up the slopes and in some of the smaller tributary drainages; however, the steep slopes in the immediate corridor have precluded harvest activities close to the river. The upper three miles of the segment are privately owned, the rest are National Forest lands.

Lower Valley (5.5 miles)

The segment from Indian Creek downstream to the Colorado Highway 160 bridge features fast water but without the crushing rapids of the Box Canyons. The pool/riffle ratio is more favorable. For white water boating the stream is swift, but lacks the dangers and difficulty found in the previous segment.

Here, topography of the river bottom widens. Agriculture and subdivision is common on private lands (approximately half of the segment). Most of this segment is served by roads paralleling the river on both sides. The road on the west is generally within sight of the river; the First Fork road on the east side continues along the river for the first two miles before starting its climb out of the valley bottom.

The grey, bluffy slopes of Mancos shale on the north side of Highway 160 signal the terminus of the study area. The lower study boundary is also the transition between the Ponderosa pine forests and the pinon-juniper forests of the foothills zone. This area is the beginning of critical big game winter range.

E. RESOURCES AND USES ALONG THE RIVER CORRIDOR

Major recreation activities in the river corridor include hiking, fishing, camping and hunting. With aggressive management the river can provide increases in selected recreation activities projected in short supply. Over 83 percent of the river is public land and open for recreation. Use figures are not available for the river corridor as the Forest Service Recreation Management System reports dispersed recreation by consolidating rivers by district and county. White water boating use is available, but not prominent.

Piedra River corridor wildlife is generally the same species found in other parts of the drainage and in other similar drainages in Colorado. The corridor provides good wildlife habitat, water for game animals and good fish habitat. Most of the river corridor below 9,000 feet provides big game winter habitat; critical winter range is adjacent to the corridor in the Chimney Rock area. Elk calving areas are generally located outside the river corridor. However, the corridor provides routes between the winter and summer range, the winter range and calving areas, and the calving areas and water. Wild turkeys inhabit the slopes in the First Fork area while two other turkey flocks range into the Sand Creek and Weminuche Creek areas. Eagle sightings along the river are fairly common. In the lower segment, above Chimney Rock, there is a concentrated nesting area.

Other wildlife categories include upland game birds, waterfowl, furbearers, varmints, non-game mammals and song birds. As each species fills an ecological niche, their importance should not be dismissed because they lack the economic importance of big game. For better understanding of the importance of the river valley and the corridor to wildlife, field biologists began a study of vegetative/wildlife associations in the Piedra drainage.

Trees of the Piedra River are varied. Wilderness segments contain dwarfed, gnarled, grotesque tree forms of limber pine and stunted spruce and fir at the upper tree limit. As the waters start their downward plunge, they pass through stands of spruce, white fir and subalpine fir. Wilderness trees and timber stands are not managed for timber harvest.

Below the Wilderness boundary the river corridor contains mixed conifer, Douglas fir, and Ponderosa pine stands. Table III shows the breakdown by species.

TABLE III
TIMBER SPECIES OF THE PIEDRA RIVER CORRIDOR:
NON-WILDERNESS SEGMENTS

<u>Species</u>	<u>Class</u>	<u>Acres</u>	<u>Inventory of Standing Timber (Volume - MMBF)</u>
Spruce-fir	Sawtimber	800	12.800
Ponderosa Pine	Sawtimber	2,800	13.400
	Poletimber	1,800	2.200
Douglas fir-white	Sawtimber	1,900	15.800
Fir	Poletimber	300	.500
Aspen	Sawtimber	300	1.800
	Poletimber	1,000	2.200
Non-forest and Water		1,600	
Total		10,500	48.700 MMBF

Prior to the river study the San Juan National Forest timber management plan had regulated the timber species into components for timber harvest. However, most of the river corridor was not regulated because of rough topography and the values of the timber did not equal the cost of harvest. Under standard harvest techniques, damage to soils, water quality, scenery and other environmental values could not be mitigated.

Under the existing timber management plan only the non-wilderness segments of the East and Middle Forks and the lower Piedra segment were available for harvest in the Forest Service's allowable cut. These areas have been cut over in the past and currently are under management for wood fiber production along with other multiple use resources.

There are 173.306 cubic feet/second (cfs) of water decreed from the river in the study area which is primarily used for irrigation, but several domestic decrees exist. Of the 40.306 cfs decreed on the Piedra mainstem, 9 cfs is under conditional decree. On the East Fork of the 108 cfs decreed, 50 cfs is conditional. Middle Fork has 25.00 cfs decreed. Sixteen ditches and two pump stations divert the decreed water. The conditional decrees are to be diverted through enlargement of existing ditches and, in one case, a new ditch is probable (see Appendix C).

F. PRIVATE LANDS OF THE CORRIDOR

All private lands along the river are located below the Weminuche Wilderness. There are 16,600 acres of private lands in the Piedra basin, only 2,702 are located within the river corridor. (See Maps II through VI).

Most of the private lands are used for livestock grazing. More recently some of the grazing lands right on the river are being sold for other uses. Following is a summary of private land uses:

<u>USE</u>	<u>NUMBER OF TRACTS</u>	<u>APPROXIMATE ACREAGE</u>
Home Sites	9	247
Resort	1	341
Retreat	1	347
Livestock Grazing	9	1,767

Of the 2,702 private acres in the corridor, only 1,660 are within the visual corridor of the river.

RIVER ELIGIBILITY

III



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- 1) Snarl rapid below First Box Canyon.
- 2) Looking northeast from the Upper Piedra Bridge.
- 3) Rafters slip by truck-sized boulder in Pitfall rapid below First Box Canyon.

III. RIVER ELIGIBILITY

A. METHODOLOGY

The study team determined eligibility of the Piedra River in the following ways:

- 1) Relevant data was gathered by specialists in various resource fields.
- 2) The public was invited to make comment concerning the eligibility criteria and any facts or opinions concerning the river, its tributaries and headwaters.
- 3) Field trips were made on the river and its tributaries to determine if the amenities existed stated in the law. Judgement criteria included the values set forth in Public Law 93-621; Guidelines For Evaluating Wild, Scenic, and Recreational River Areas Proposed For Inclusion In The National Wild and Scenic Rivers System as adopted by the USDI-USDA; and Evaluation Guidelines For Tributary And Headwaters In The Piedra Wild And Scenic River Study presented for public comment at the beginning of the study. The public was invited on each field trip to participate in on-the-ground discussions leading to team eligibility findings.
- 4) All inputs from the public were evaluated.
- 5) After workshop discussions with the public to discuss the team findings, eligible segments were aggregated according to classification level suitability.

The Wild and Scenic Rivers Act contains the basic criteria for rivers or segments of rivers considered for inclusion in the national system. They must be free flowing and possess one or more outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values.

Basic criteria in the Wild and Scenic Rivers Act are supplemented by the 1970 Guidelines. Pages 2-5 of those guidelines spell out the general characteristics of the rivers to be included in the system. For the Piedra River, the more important of these include free flowing character, water volume, length, water quality and the outstandingly remarkable amenities.

Supplementary guidelines for the Piedra were developed for public review as part of the public involvement program. The intent of these guidelines was not to define an outstandingly remarkable value but to provide members of the study team and public a list of characteristics or combinations of features that should be considered when making the evaluations. This also provided opportunity for the public to comment on the evaluation process and to review the basis on which the team findings were made.

B. RIVER ELIGIBILITY

The Piedra River and its two upper forks considered as a system contain several of the values identified in the law. With the exception of an approximate 2-mile stretch along the East Fork, the river as a system exceeds minimum criteria of the law.

Free Flowing. The river system from its headwaters near the Continental Divide to the intersection with Colorado Highway 160 is essentially free flowing except for two diversions that dry the segments below them. The Piedra Falls Ditch Company's diversion on the East Fork completely dams the stream and diverts the entire flow of water in normal years during the irrigation season, corresponding with the recreation season. (This segment, found to be not eligible, is discussed later in this chapter.) At the head of the East Fork the State Division of Wildlife maintains a transcontinental water diversion with two ditches that sometimes dry the upper portion of the stream at its headwaters. There are thirteen other irrigation diversions, but they do not appreciably restrict the free flowing character of the stream.

The study corridor is crossed by only three road bridges (not including the Colorado Highway 160 bridge at the lower terminus of the river study) that momentarily restrict the river flow with their abutments. Two trail bridges also cause a momentary effect of the free flowing character. These minor diversions and bridge structures have only temporary constricting effect, having little effect on eligibility.

Water Volume. In the study area there were two flow gages maintained by the USGS-USDI. Their records indicate the following:

Middle Fork Piedra
Period of Record--1969 to 1974 (discontinued)
Average Discharge--Period of record, 39.9 cfs--28, 910 acre ft./yr.
Extremes--maximum 2, 520 cfs, 9/5/70; minimum 4.5 cfs, 1/15/74

Piedra River Near the Highway 160 Bridge

Period of Record--1911, 1912; 1938, 1973 (discontinued)

Average Discharge--35 year base, 309.0 cfs--223, 900 acre ft./yr.

Extremes--maximum--flood of 1911, not determined; maximum determined 7,980 cfs, 9/6/70;
minimum 17 cfs, 11/11/50

Recorded flows and these observed indicate the river can and does maintain fish populations for recreation use. It also provides sufficient flows for aesthetics, white water boating, wading and general enjoyment.

Length. There are 50.9 miles of river in the system (excluding the two miles found ineligible). The combined length of the Piedra and its two upper forks provide more than adequate length for wild and scenic river criteria.

Water Quality. In 1975, the San Juan National Forest conducted a base line water quality study for the Piedra drainage basin. 6/ Seventeen monitoring stations were established in the drainage, seven on the study river. Quality measurements were determined for temperature, nitrogen and phosphorus, hardness, alkalinity, specific conductance, turbidity, dissolved oxygen, coliform bacteria and presence of Benthic Invertebrates (see Appendix C). The data collected indicate high water quality. With exception of one temperature and four pH samples, the Piedra River system meets State and Federal standards for addition to the National Wild and Scenic River System.

Microbiological samples taken by the Forest Service indicate the Piedra drainage is clean. The August/September survey (10 sample sites in the Piedra drainage) found no fecal coliform groups. Total coliform concentrations were low, averaging 7 per 100 milliliters. The largest concentrations found were 25 at one site and 20 at another. Federal standards for primary contact recreation are not to exceed a log mean of 200/100 ml, nor shall more than 10 percent of total samples during any 30-day period exceed 400/100 ml.

Eighteen locations were sampled for macro-invertebrates. The lowest number found was 6 and 293 the highest. The types and diversity of organisms present are another indicator of water quality. The Piedra samples had a high diversity with no abundance of any one group.

Water quality was also determined for aesthetics prescribed by the National Technical Advisory Committee On Water Quality. 7/ Criteria are:

- 1) All surface waters should be capable of supporting life forms of aesthetic values.
- 2) Surface waters should be free of substance attributable to discharges or wastes as follows:
 - materials that will settle to form objectionable deposits
 - floating debris, oil, scum and other matter
 - substances producing objectionable color, odor, taste, or turbidity
 - materials, including radionuclides, in concentrations or combinations which are toxic or which produce undesirable physiological responses in human, fish and other animal life and plants
 - substances and conditions or combination thereof in concentrations which produce undesirable aquatic life

The study team concluded that with minor exception the waters of the Piedra River met or exceeded Colorado Water Quality Standards. 8/

The outstandingly remarkable values were collectively identified for the river system as a whole. The values were also viewed as components of a whole, i.e., in some cases all the attributes of a given value may not have been present, but those existing coupled with the attributes of another value to create an outstandingly remarkable situation.

6/ Sullivan, Robert J., 1975 Water Quality Survey of the Piedra River, 1976, Unpublished administrative Study, San Juan National Forest.

7/ USDI-Federal Water Pollution Control Administration, Water Quality Criteria, 1968, Report of the National Technical Advisory Committee of Water Quality Criteria, pp. 3-4.

8/ Colorado Class B₁ Standard, Water Quality Standards and Stream Classification, Colorado Department of Health, Effective June 19, 1974.

Scenic. Various scenic attributes along the river create an outstandingly remarkable situation. At its headwaters, the Piedra meanders through U-shaped alpine valleys. In these areas the streams are fed by similar tributaries cascading down steep chutes or over large rocks and cliffs. The high meadows are fringed with timber except where the meadows intersect with the alpine vegetative type found in Colorado.

As the streams flow to lower elevations, they cut deep gorges or V-shaped valleys. On both the Middle and East Forks this section of the stream provides examples of the phenomena of stream cutting power in contrast to the lazy meanders in the higher meadows. In these areas the water is rimmed by steep cliffs and slide rock; in turn, these cliffs and slides are flanked by conifer stands extending upwards toward the apex of the surrounding peaks. The East Fork culminates in a waterfall with a several hundred foot drop. In the lower valley the streams pass through rolling stands of timber and then through incised meanders of the open range country. The rolling pasture country in this section provides visual contrast with the surrounding forested areas.

Below the confluence of the Middle and East Forks, the main Piedra starts cutting its way through sedimentary rocks laid down before man arrived. A short segment of the stream cascades down through vertical cliffs until it breaks out into a wider U-shaped valley. The scenery of the valley is created primarily through a great variety of vegetative patterns found in the river bottom and on the valley slopes.

Aesthetics of the water provides striking contrast and visual beauty. The box canyons narrow the river into a series of fast falling rapids, creating spectacular hydraulics. In other segments the stream varies between pools with slow currents to fast shallow riffles. In some sections the river runs straight for one-half to three-quarters of a mile, only to abruptly change direction.

Recreational. The Piedra River provides a full variety of water-related recreation except that the water temperature restricts swimming most of the recreation season. The box canyons in the lower Piedra are difficult and challenging for white water users. The wide range of recreation opportunity meets outstandingly remarkable criteria.

Geologic. Geology of the valley and river system is manifested in the canyon walls and rock outcrops on the valley slopes. Exposed rocks range from the Quaternary period of the Cenozoic era back in time to the Precambrian period. ^{9/}

Between the Precambrian and Quaternary periods, intermediate geologic time periods exposed (see Map #VII) include:

- 1) Ignacio formation of the upper Cambrian, Deronian and Lower Mississippian periods (Paleozoic era).
- 2) Cutler formation of the Lower Permian period.
- 3) Entrada, Morrison and Wanakah formation of the Upper Jurassic period (Mesozoic era).
- 4) Dakota sandstone of the Cretaceous period.

Exposed formations represent 8 of the 12 accepted geologic time periods (Op. Cit. 1, pp.-1). Almost as many time periods displayed in the Grand Canyon, generally accepted as a superlative example of exposed geologic ages.

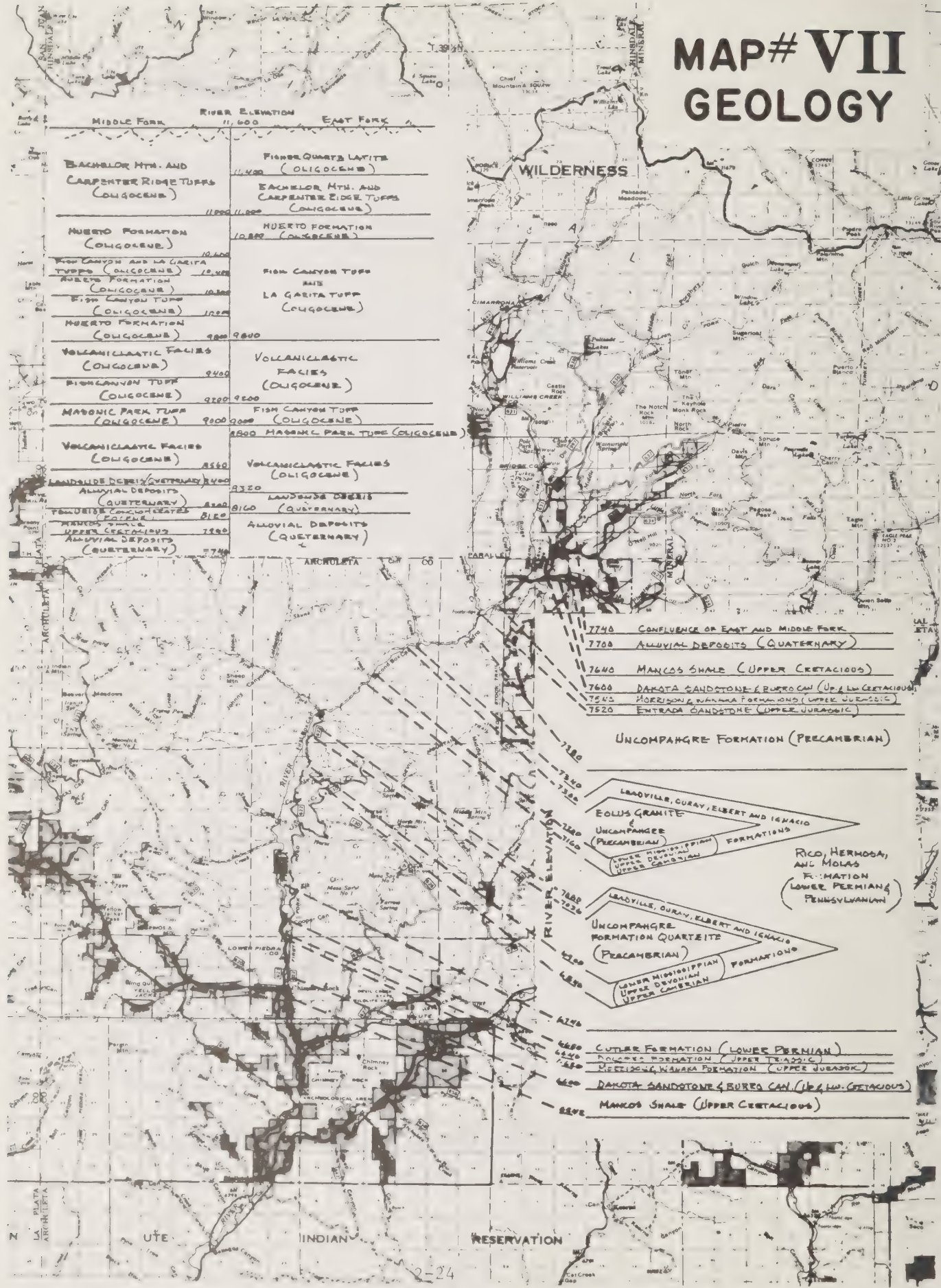
These geologic values not only provide opportunity for study and viewing, but comprise part of the outstandingly remarkable scenery.

Wildlife. Two wildlife species add to the overall values of the river although the valley is not considered to contain outstandingly remarkable wildlife values. The lower river is used as a hunting area by falcons of a nearby Peregrine aerie. These birds are an endangered species. The Piedra valley also has a fairly large population of Abert's squirrel.

Historic and Cultural. The river and its immediate environment do not possess any known historic or cultural features of national significance. However, by virtue of the river's location near the Chimney Rock ruins (Anazasi), there may be opportunity for cultural finds. During the course of an archeologic survey for this study, two sites were found that provide opportunity for further study of transient use by earlier cultures.

^{9/} Stevens, T. A., P. W. Lippman, et. al., Geologic Map of the Durango Quadrangle, Southwestern Colorado, U. S. Department of the Interior, Geologic Survey, Washington, D. C., Map I-764, 1974.

MAP#VII GEOLOGY



C. SEGMENTS NOT ELIGIBLE

During the field studies two segments of the Piedra East Fork were found ineligible because they lacked free flowing condition. Most years during the recreation season the stream is diverted for wildlife and irrigation purposes. Federal guidelines require that a river have sufficient volume of water during normal years to permit, during the recreation season, full enjoyment of water-related outdoor recreation activities generally associated with comparable rivers.

The ineligible segments are on the East Fork from the Continental Divide downstream approximately one-quarter mile; and a 2-mile stretch below the Piedra Falls ditch diversion.

Wild and scenic river legislation does allow that any stream segment (river) in its free flowing condition, "or upon restoration of this condition" shall be considered eligible. In the event existing water supply is inadequate, it is necessary to show that additional water, or the condition rendering ineligibility, can be restored or provided reasonably and economically without unreasonably diminishing other related values of the area. Water can physically be restored to the Piedra East Fork through acquisition of water rights from two irrigation users or the State Division of Wildlife. Both alternatives can be accomplished without further environmental degradation. Upon returning and maintaining sufficient water volume to the stream, this section would be eligible.

RIVER CLASSIFICATION SUITABILITY

IV



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- 1) The lower river near Colorado Highway #160.
- 2) Water level before spring runoff.

IV. RIVER CLASSIFICATION SUITABILITY

Wild and Scenic River legislation provides for three levels of classification:

"(1) Wild river areas--Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America."

"(2) Scenic river areas--Those rivers or sections of rivers that are free of impoundments, with shorelines or watershed still largely primitive and shorelines largely undeveloped, but accessible in places by roads."

"(3) Recreational river areas--Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundments or diversions in the past."

The criteria are summarized from the "Guidelines for Evaluating Wild, Scenic, and Recreation River Areas proposed....under Section 2, Public Law 90-542". Once eligibility for the river system was determined, the river segments were divided according to suitability potential (see Map #VIII).

Classification potential is based on the following classification suitabilities (see Table IV):

- Lower Piedra--Colorado Highway 160 upstream to Indian Creek, 5.5 miles, suitable only for recreational classification because of bridges, parallel roads and housing along the river.
- Piedra River Canyons--Indian Creek upstream to lower side of the Forest Development Road (FDR) 631 bridge, 14.7 miles, suitable for wild classification. This segment contains the First Fork bridge which is neither expressly permitted or prohibited. In view of the bridge implementing the recreation component, the segment containing the bridge was found to be wild rather than a less restrictive classification level.
- Middle Segment--FDR 631 bridge to confluence of East and Middle Forks, thence upstream on both forks to the Weminuche Wilderness boundary, 12.9 miles, suitable for scenic classification. Use impact on private lands and access to the river do not suggest wild classification. Two isolated segments approximating 2.5 miles are ineligible but would be suitable for scenic classification if water were restored to the stream.
- Upper Middle Fork--Weminuche Wilderness upstream to the Continental Divide, 9.3 miles, suitable for wild classification.
- Upper East Fork--Above the Piedra Falls diversion dam upstream to a point below the State's diversion ditches and gage on the Continental Divide, 8.5 miles, suitable for wild classification.

MAP#VIII

STRUCTURES MAP

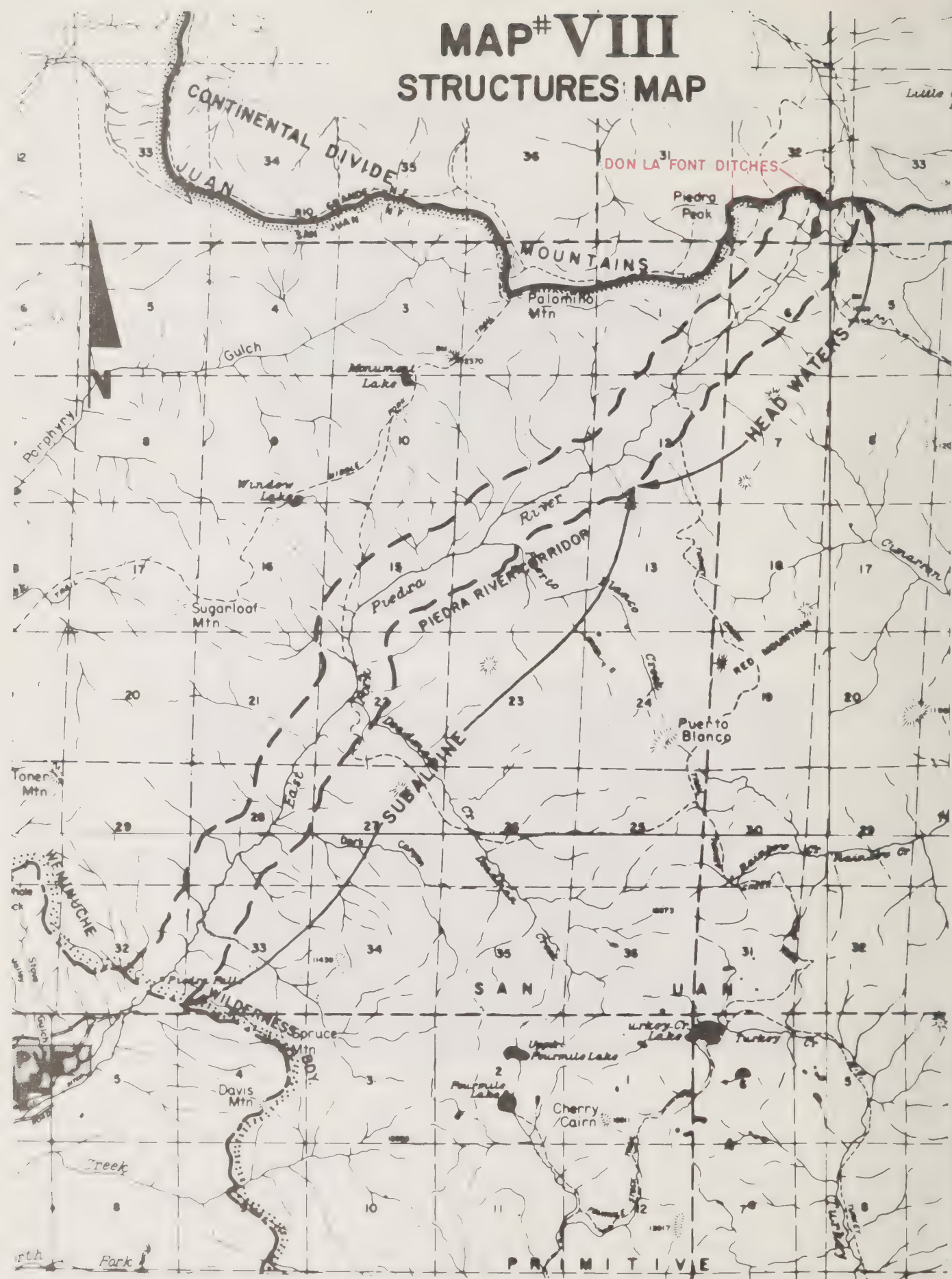
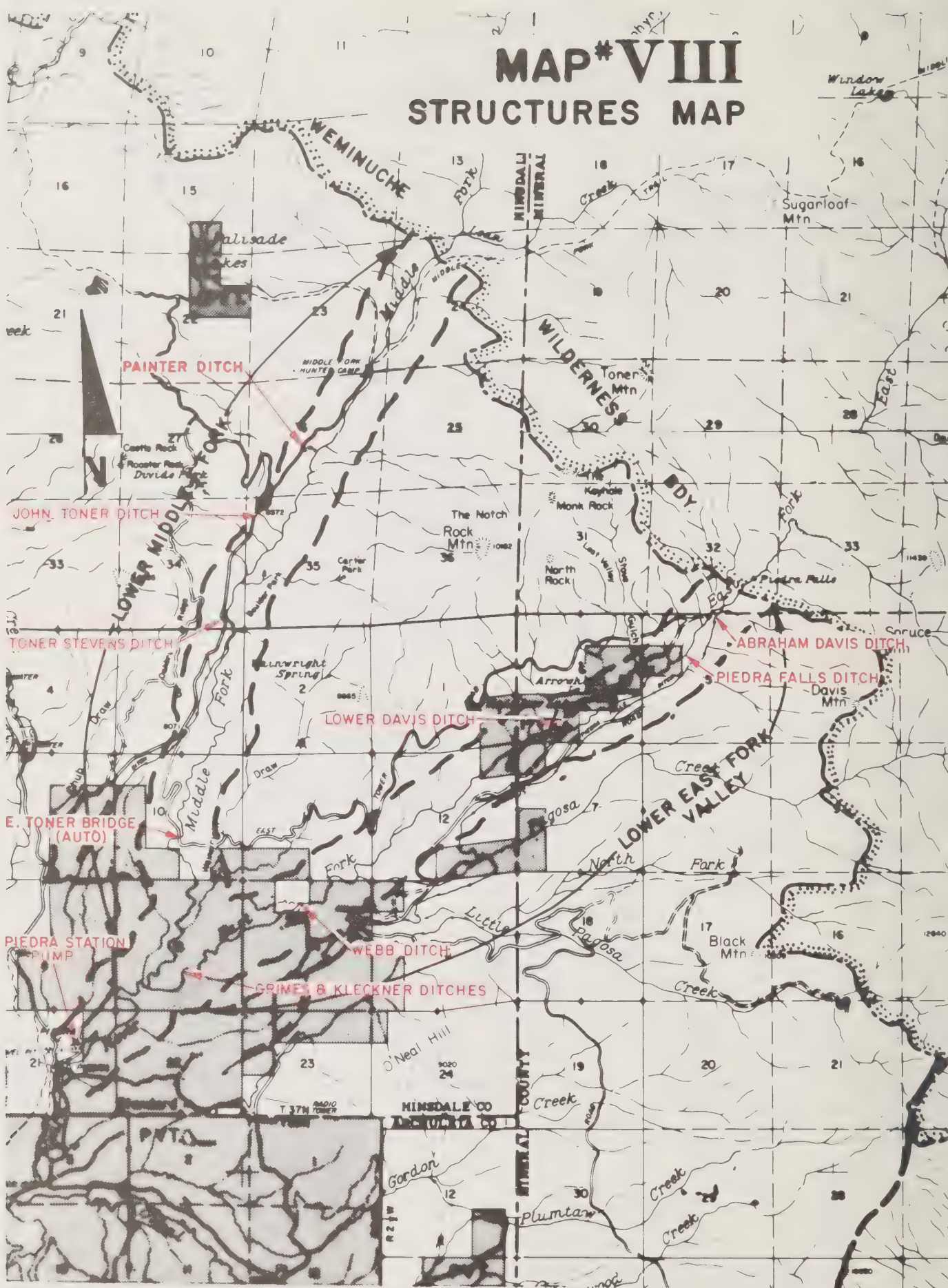


TABLE B-II-I
ECOLOGICAL LAND UNITS - PIEDRA RIVER CORRIDOR

ELU #	ELU NAME AND GENERAL LOCATION	ANNUAL PRECIPITATION	SLOPE RANGE (%)	GEOLOGY	SOIL TYPES	SOIL EROSION HAZARD	MASS MOVEMENT POTENTIAL	CHANNEL STABILITY	DEVELOPMENT SUITABILITY
2	High Uneven Mountains-Mixed Conifer								
2-5	T. 38N., R. 3W.	29-39"	0-99	Igneous	50, 23	M	L	G	S
2-6	T. 37N., R. 2W.	28-51"	15-99	Igneous	50, 24	H	M	G	PS
3	High Uneven Mountains-Alpine (Rock-Grass-Other)								
3-1	T. 37N., R. 5W.	44-57"	15-60	Granite	14, 24, 19	H	L	G	U
6	Mass Movement Depositional- Mixed Conifer								
6-8	T. 35N., R. 4W.	22-29"	30-99	Sandstone & Shale	43, 13	H	M	F	U
6-9	T. 36N., R. 4W.	23-28"	30-60	Sandstone & Shale	12, 4, 8	H	L	F	U
6-20	T. 37N., R. 2W.	27-42"	0-30	Volcanics & Debris	50, 35	H	M	F	PS
6-24	T. 38N., R. 3W.	29-35"	0-30	Volcanic Materials	50	L	L	G	S
9	Mass Movement Depositional- Ponderosa Pine								
9-1	T. 35N., R. 4W.	20-27"	15-99	Shale & Sandstone	4, 43	H	H	F	U
9-5	T. 36N., R. 4W.	22-30"	30-60	Shale & Sandstone	43, 8	H	M	F	U
14	Mass Movement Depositional- Mountain Bunchgrass								
14-2	T. 38N., R. 3W.	28-29"	0-15	Volcanic Materials	50, 38	L	L	G	S
19	Sedimentary Fluvial 2 & 3- Spruce Fir								
19-11	T. 36N., R. 3 & 4W.	23-27"	15-45	Sandstone	9	H	H	M	U
19-14	T. 37N., R. 3W.	23-27"	0-60	Sandstone	9, 43	H	M	F	U
20	Sedimentary Fluvial 2 & 3- Mixed Conifer								
20-7A	T. 36N., R. 3 & 4W.	27-29"	0-60	Sandstone	35, 9, 12	H	L	F	U
20-7D	T. 35N., R. 4W.	24-35"	0-60	Sandstone, Claystone, Igneous	8, 9, 12	H	M	F	U

MAP #VIII

STRUCTURES MAP



MAP#VIII

STRUCTURES MAP



MAP*VIII

STRUCTURES MAP

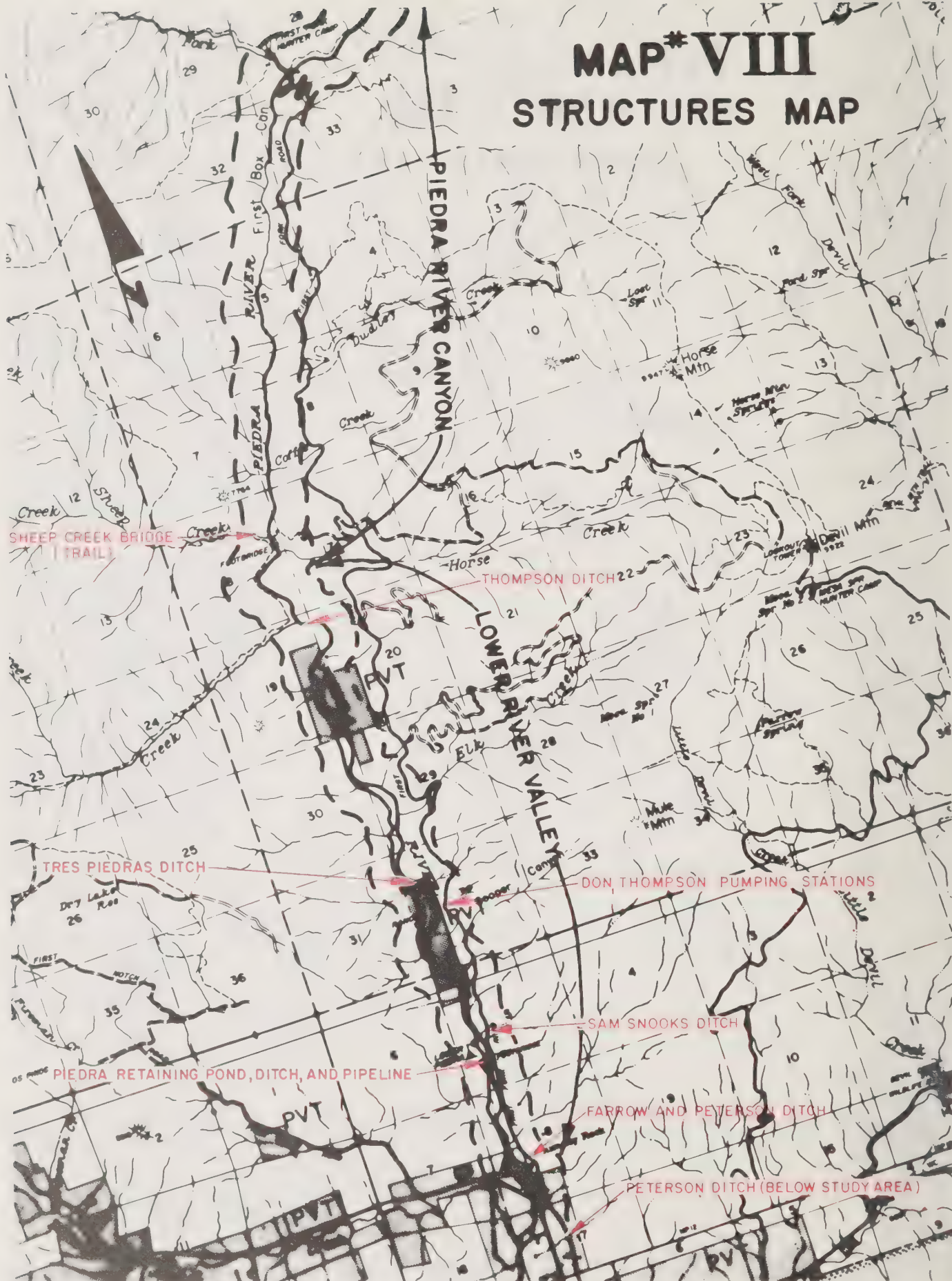
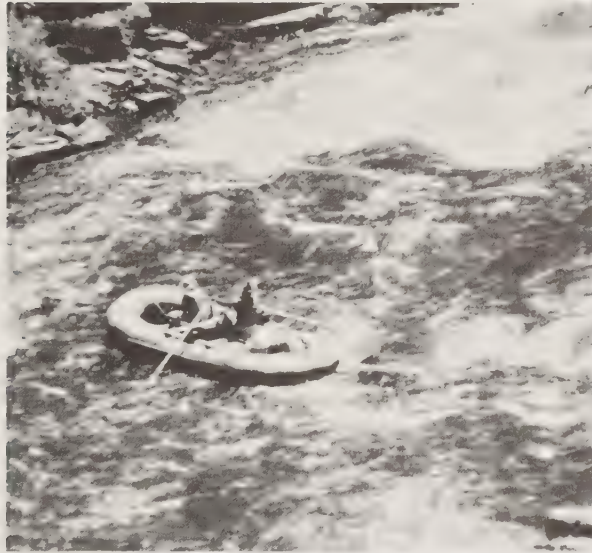


TABLE IV
CAPSULE SUMMARY OF CLASSIFICATION SUITABILITY

<u>Characteristic</u>	<u>Lower Piedra</u>	<u>Piedra Canyons</u>	<u>Middle Segment</u>	<u>Upper E. Fork</u>	<u>Upper M. Fork</u>
Free Flowing Character as Affected By:					
Impoundments	None	None	None	None	None
Diversions	6	None	11	2	None
Road Bridges	2	1	2	None	None
Trail Bridges	None	2	None	None	None
Improvements Affecting Scenery:					
Dwellings	5	None	10	None	None
Outbuildings	Yes	None	Yes	None	None
Agriculture Barns	2	None	2	None	None
Commercial Buildings	2	None	4	None	None
Livestock Fencing	Yes	None	Yes	None	None
Gravel Excavation	Yes	None	Yes	None	None
Mines	None	None	None	None	None
Accessibility As Affected By:					
Shoreline Roads	2/7 miles	None	2/5 miles	None	None
Road Crossings	2	1	2	None	None
Improvements Affecting Recreation:					
Developed Recreation Sites (F.S.)	1	1	2	None	None
Trail Access	No	Yes	No	Yes	Yes
Classification Suitability	<u>Recreational</u>	<u>Wild</u>	<u>Scenic</u>	<u>Wild</u>	<u>Wild</u>

RIVER PLAN ALTERNATIVES

V



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- 1) Rapid above the First Fork bridge.
- 2) Private lands along the Middle Fork

V. RIVER PLAN ALTERNATIVES

Alternative classification plans were developed for analysis to determine potential uses of the river corridor that would be affected. Alternative plans were developed, analyzed and evaluated in accordance with the Water Resources Council's principles and standards for planning water and land resources. These planning procedures are explained in detail in the accompanying Environmental Impact Statement.

The Wild and Scenic Rivers Act has an overall intent of maintaining status quo for eligible rivers. Past uses and developments in the river corridor have resulted in an unusual situation on the Piedra. Most of the river that could be impacted by other land resource uses has been affected. Although many classification alternatives exist because of the segments with different classification levels, no alternative resulted in real significant differences in future resources and uses.

After developing and testing initial alternatives, seeking public comment, redeveloping and re-testing, three alternatives were selected for analysis:

- 1) Plan I--Designate the Piedra River as a component of the national rivers system with each segment classified at the most restrictive level for which it qualifies.
- 2) Plan II--Designate the Piedra River as a recreational component of the national rivers system.
- 3) No Designation--Continuation of current management practices under existing law and regulation.

A. RIVER DESIGNATION PLAN I

All eligible segments of the river would be classified to their most restrictive level of classification. The wild, scenic and recreational segments would be managed to meet their respective classification objectives.

Resource Uses and Developments. Resource trends for the corridor will remain essentially the same as under Alternative Plan II. Timber harvest in all segments (except the lower segment classified recreational) would be prohibited. When existing recreation, range management and other non-trail management facilities become irreparable, they would not be replaced. This would not affect developed site capacity because new sites could be developed outside the river corridor.

Uses on private lands would be limited to current activities. Lands now used for livestock operations would be restricted to that use.

Mineral location and leasing entries would be prohibited.

Environmental/Land Use Impacts. No adverse environmental impacts resulting from wild and scenic classification are foreseen. Potential environmental degradation caused by increased recreation can be mitigated through controls over user numbers in the wild and scenic segments.

Transportation and Land Ownership. Transfers of private land to public ownership in fee title is not needed. Controls preventing environmental degradation on private lands would be acquired through scenic easements.

The transportation system for the Piedra basin would be limited to existing river crossings. Trails along the wild segment would be closed to motorized vehicles.

B. RIVER DESIGNATION PLAN II

All eligible segments of the East Fork, Middle Fork and mainstem of the Piedra would be classified as recreational and managed under the general guidelines of the adopted management objectives.

Resource Uses and Development. Timber harvest would not occur in the river corridor in the immediate future. Recreation uses would continue increasing. The existing balance between motorized and non-motorized dispersed recreation facilities could be met by including some camping sites along with construction of boater put-in and take-out facilities.

Recreational classification would encourage water front homesite development on private lands.

Mineral leasing and location would not be permitted in the river corridor.

Environmental/Land Use Impacts. Management of National Forest lands would not result in any major impacts. On private lands, adverse impacts from increased homesite development could be avoided by acquiring scenic easements; however, this does not assure a lower level of intensive developments than currently exists.

The major overall environmental impact would be the change or loss of existing wild and scenic values being managed under recreational objectives. These values, on the segments where they now exist, could be changed to the less restrictive value and amenities of recreational classification.

Transportation and Land Ownership. The management objective constraints of this alternative provide optimum accessibility to the river. Roads accessing, crossing, or along the river corridor could be constructed, but there does not appear to be any need for additional roads in the near future.

Transfer of private lands to public ownership in fee title is not needed. Controls, where possible, would be acquired through easements.

C. NO DESIGNATION PLAN

The Forest Service will continue current management of National Forest lands under the multiple use concept. The river corridor would be managed to balance resource outputs with the capability and suitability of each individual Ecological Land Unit. The segments in the wilderness would be under the objectives and planned management for the Weminuche Wilderness, which has more restrictive management. Management of the wilderness segments will be the same under all alternative plans.

Resource Uses and Development. Timber harvest would occur in the corridor along the East and Middle Forks where stands have been harvested in the past and are now under management. Harvest in these areas would not occur in the near future; approximately 40 years are left in the management rotation. If aerial logging technology should become cost/effective for the San Juan National Forest, the entire corridor could be harvested in accordance with prescribed silvicultural treatments for individual tree species.

Recreation use will continue to increase but demand for additional site capacity will be met outside the river corridor. Existing motorized dispersed recreation activities on trails along the river would continue at current levels since most opportunity for range improvement is located on those portions of the allotments outside the river corridor.

Exploration for leasable minerals is expected to increase. The number of drill sites and access roads would increase. The potential for hydroelectric energy would exist with an improved benefit/cost ratio.

Livestock grazing and irrigated pastures would continue to be the predominant uses of private lands. There would probably be an increase of private land sales for homesites with river frontage.

Environmental/Land Use Impacts. Management of National Forest lands within the corridor would not result in any significant impacts that could not be mitigated through the use of standard management techniques. Scenic values can be protected through screening and management to meet visual quality objectives. Impacts of mineral exploration will continue although minimized through road closure and obliteration.

The impact of development on private lands will result in the loss of rural scenery and may also result in stream shore modifications. Water quality may be depreciated through ineffective sewage systems.

Transportation and Land Ownership. There would be no transfer of private lands to public ownership. Furthermore, scenic and access easements would not be acquired, resulting in few constraints on use of private lands.

To provide for more efficient timber harvest and loop recreation drives could result in one or two more river crossings on the East and Middle Forks.

CONCLUSIONS AND RECOMMENDATIONS

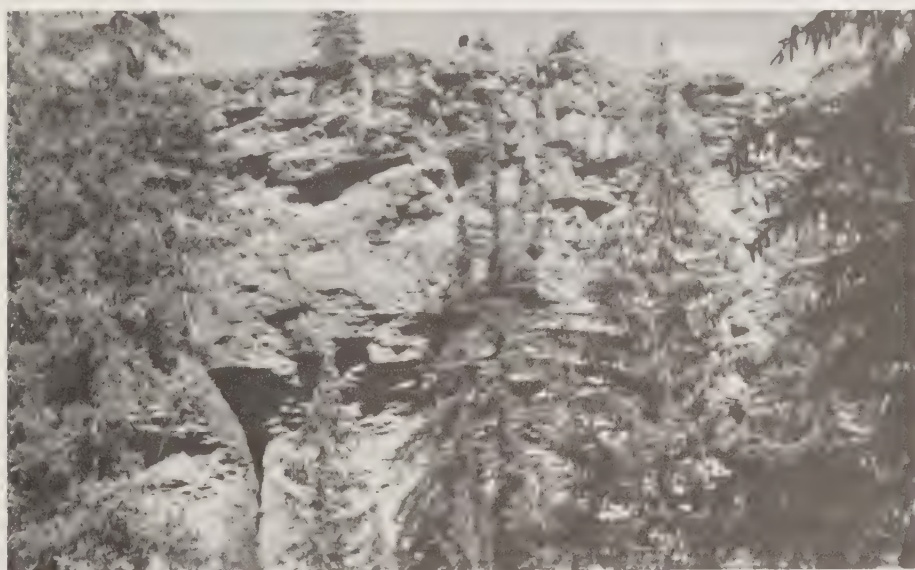
VI



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- 1) Waterfall on Lean Creek that cascades into the Middle Fork.
- 2) Piedra River at early spring.
- 3) Rocks of the Piedra.

VI. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The Piedra River and its East and Middle Forks, upstream from Colorado Highway 160 to its headwaters along the Continental Divide, is eligible (with two exceptions) to be included in the National Wild and Scenic Rivers System. The exceptions are:

- 1) The two mile segment of the East Fork from Pagosa Creek upstream to the Piedra Falls Ditch diversion dam is de-watered during the recreation season, but would be eligible if water were restored to the stream bed during the summer months.
- 2) A short (approximately one-quarter mile) segment at the top of the East Fork from some unnamed ponds up to the State of Colorado's diversion ditches is de-watered, but would be eligible if water were restored to the stream bed during the runoff period.

B. CLASSIFICATION RECOMMENDATIONS

In accordance with Public Law 90-542 as amended by Public Law 93-621 and the guidelines issued by the Secretaries of Agriculture and Interior, the 51 miles of river is recommended for classification as follows:

- 1) Lower Piedra--Colorado Highway 160 to Indian Creek
(About 5.5 miles) Recreational
- 2) Piedra Canyons--Indian Creek to Forest Development Road 631
(About 14.7 miles) Wild
- 3) Middle Piedra--FDR 631 to the confluence of the Forks, thence upstream to the Weminuche Wilderness boundary on both the Middle Fork and East Fork
(About 12.9 miles) Scenic
- 4) Middle Fork--Weminuche Wilderness boundary up to and including the seven unnamed drainages along the Continental Divide that comprise the headwaters
(About 9.3 miles) Wild
- 5) East Fork--Weminuche Wilderness boundary up to the unnamed ponds approximately one-quarter mile below the Continental Divide
(About 8.5 miles) Wild

The Wild and Scenic Rivers Act allows a period of about one year after river designation for the administrative agency to prepare a management plan, including detailed boundaries (governed by provisions of the Act), classifications and plans for necessary developments in accordance with its classifications. This management plan must be published in the Federal Register and does not become effective until 90 days after it has been forwarded to the President of the Senate and the Speaker of the House of Representatives. The objective of this plan is to protect and enhance the values that enabled the river to be added to the national system with a minimum impact on private landowners and existing land use practices. Provisions in this plan determine the nature and the extent of the effects to private landowners. It is recommended that this plan be prepared in cooperation with Federal, State and local interests.

Since the primary purposes of river designation are to protect the river environment and provide for the benefit and enjoyment of present and future generations, there are three basic framework components for proposed river management. They are:

- 1) protective management on public lands
- 2) protection of the environmental values on private lands within the corridor
- 3) developments for providing public use and enjoyment

C. MANAGEMENT RECOMMENDATIONS

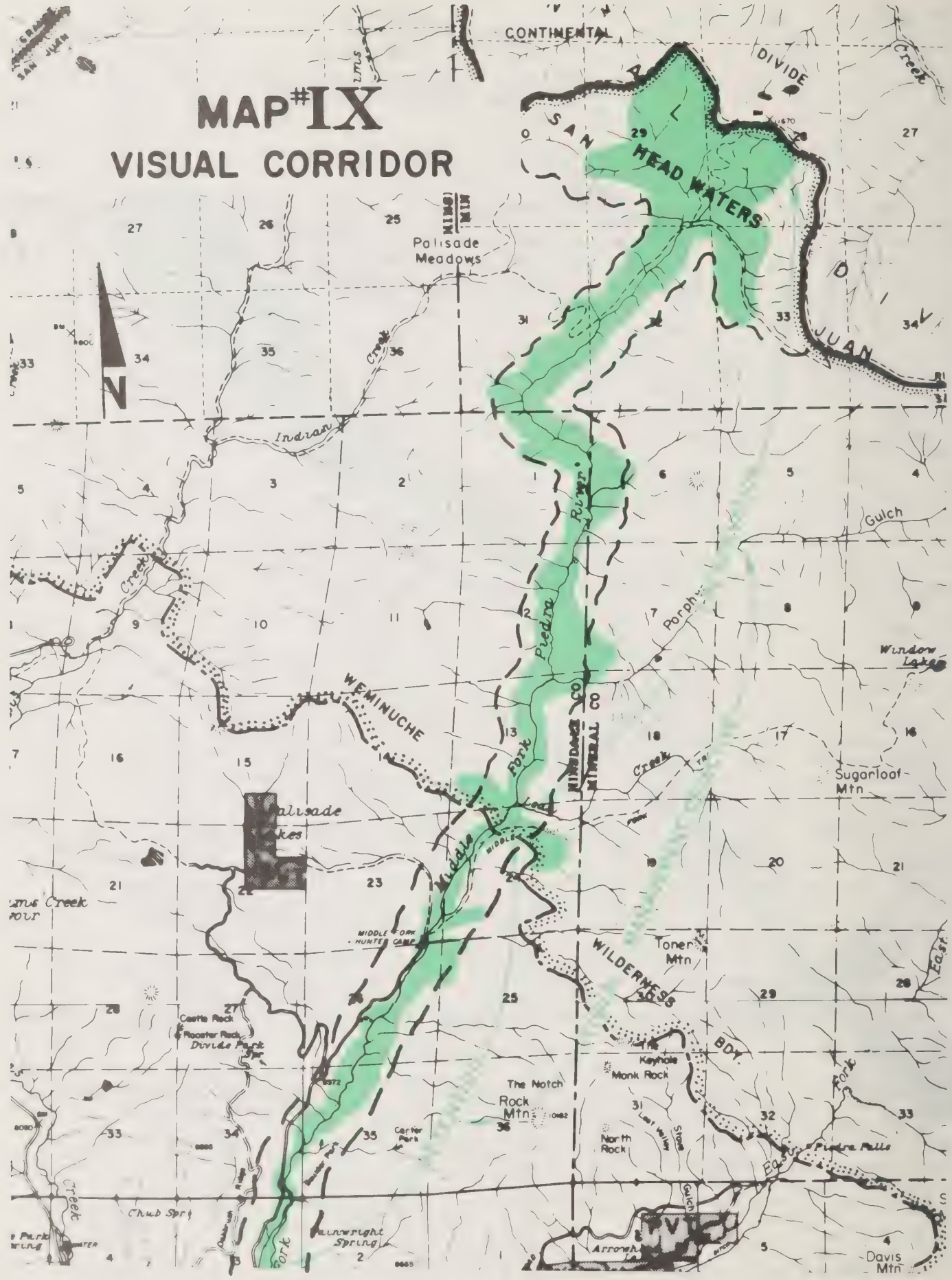
The boundaries should be established according to the maximum established by law (not to exceed an average of 320 acres per mile) rather than according to a visual corridor. The visual corridor was defined utilizing the Forest Service Visual Management System since the Piedra lacks clearly defined visual boundaries found on many canyonland-type rivers. The system, briefly described, identifies the foreground viewing area, its visual variety class and the sensitivity level. These factors combined to establish the visual corridor with the visual management objective of natural scenery retention (see Map #IX). Since the maximum corridor allowed by law generally encompasses the visual corridor, the recommended corridor is that established by limitations of the law.

MAP#IX



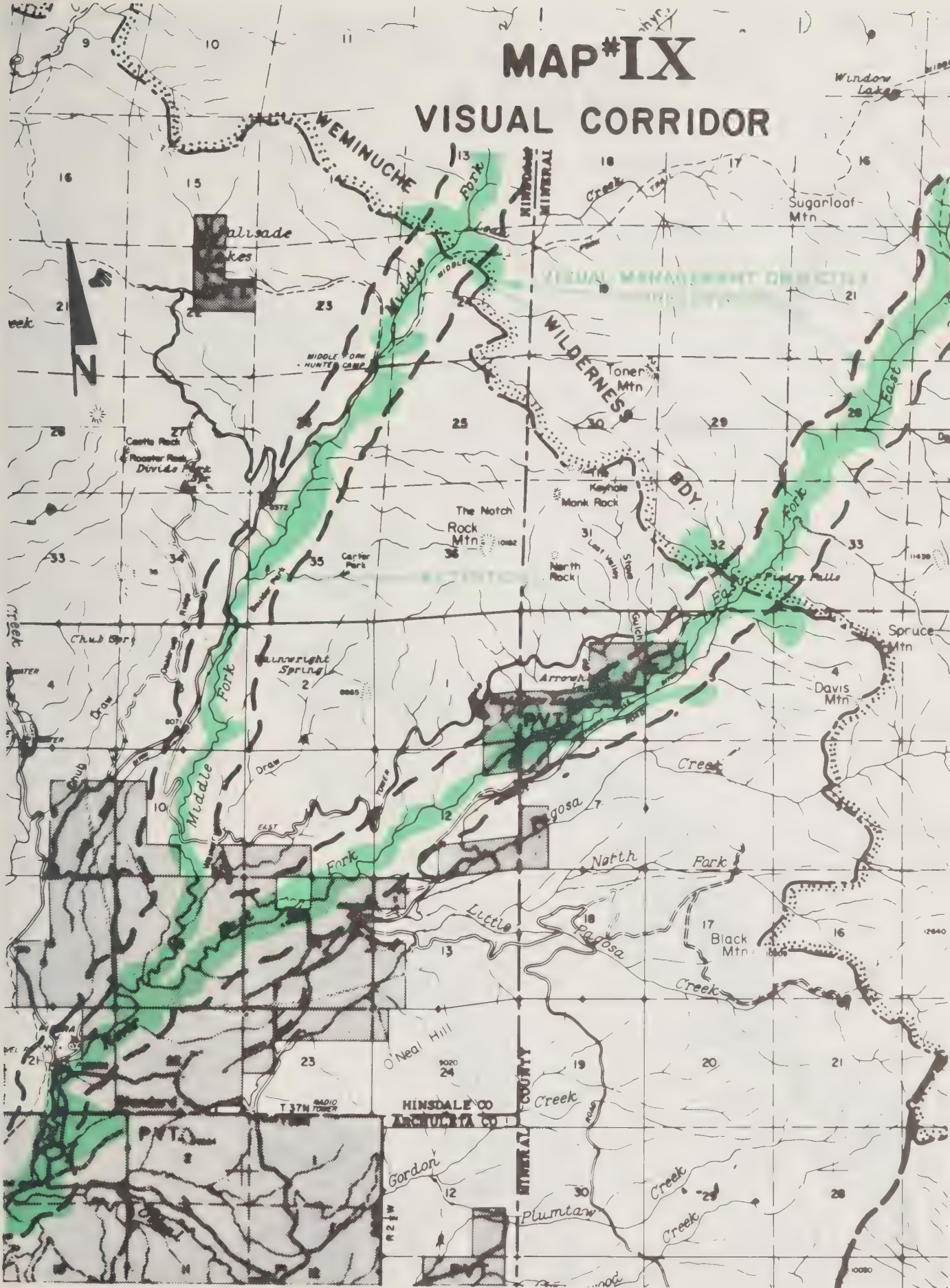
MAP#IX

VISUAL CORRIDOR



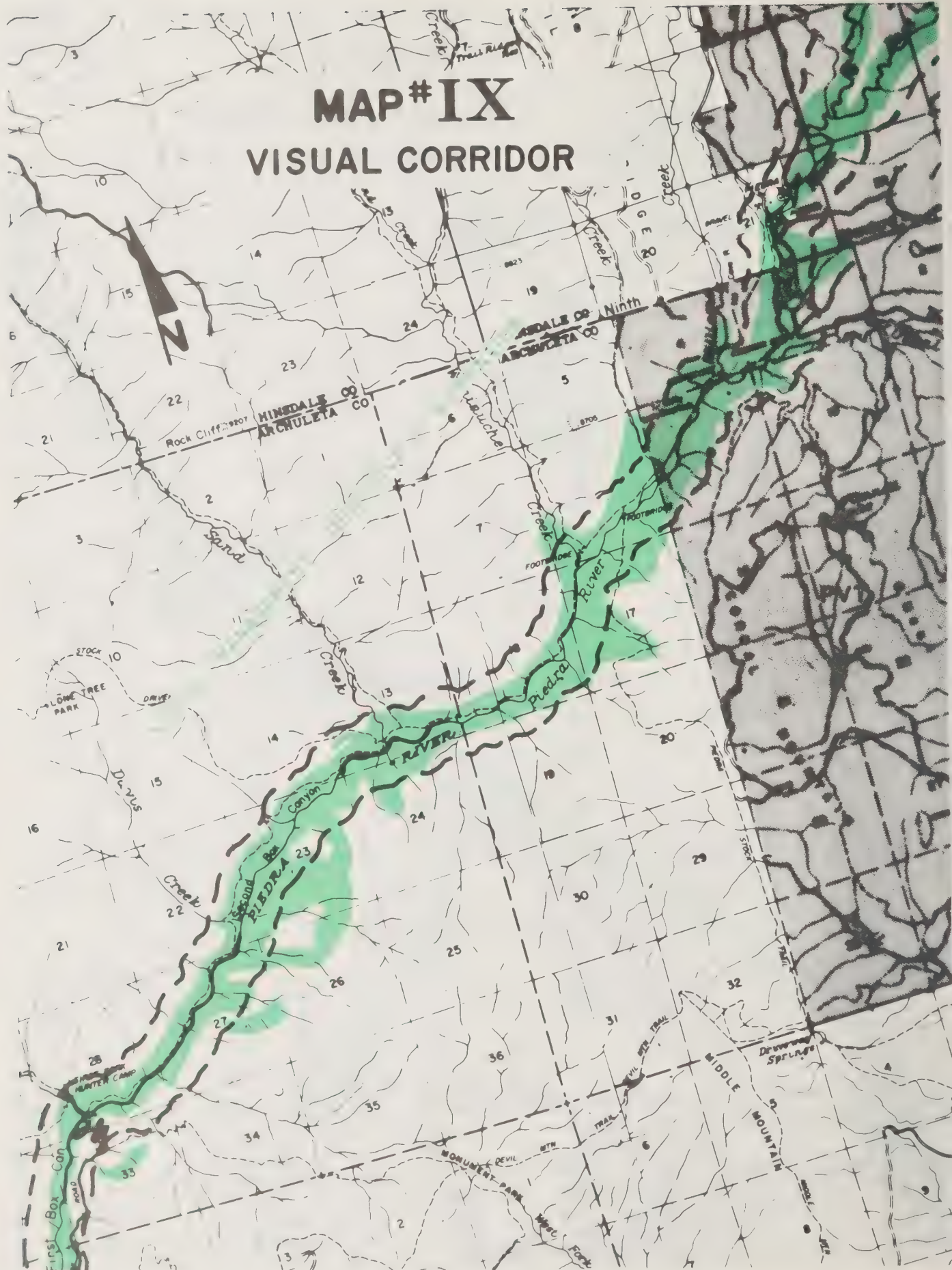
MAP#IX

VISUAL CORRIDOR



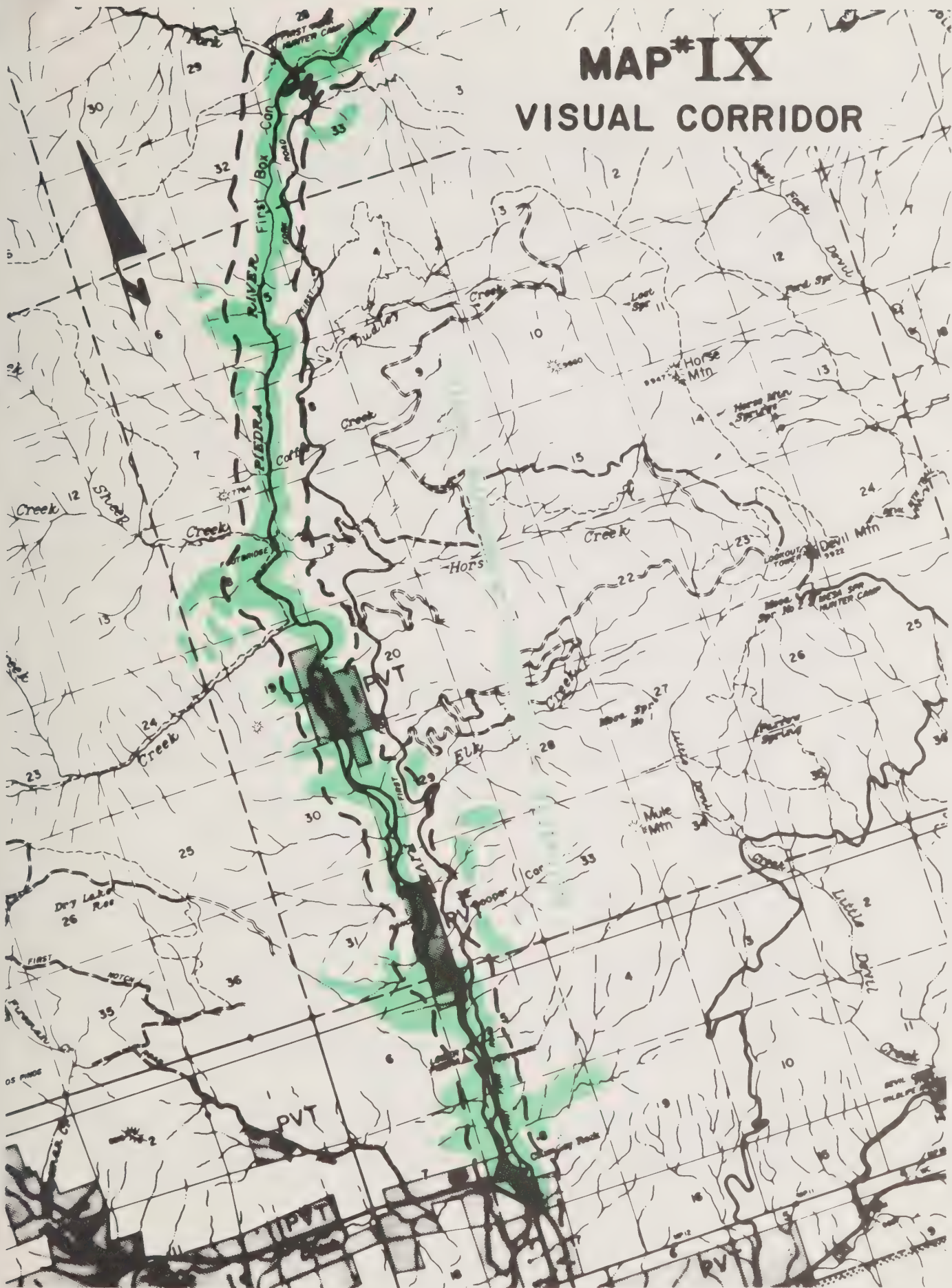
MAP#IX

VISUAL CORRIDOR



MAP*IX

VISUAL CORRIDOR



Approximately 16,300 acres of the Piedra River corridor should be included in the designation. Approximately 5,700 acres are within the Weminuche Wilderness and the remaining 10,600 acres divided between National Forest and private lands (7,900 acres and 2,700 acres respectively).

The administration of the Piedra River will be under the U. S. Department of Agriculture, Forest Service, with the preparation of the management plan fully and actively involving Federal, State, local government agencies, industry representatives and interested local citizens.

In general, each component of the system should be administered in accord with these goals:

- Maintain existing free flowing character of the river above Colorado Highway 160 bridge.
- Consider water acquisition to restore the ineligible segments of the East Fork.
- Preserve and enhance the natural scenic values in accord with the visual management objectives by using screening techniques such as vegetation, natural rock and non-specular paints (flat, non-reflective, earth tone pigments) to diminish visual impact of existing improvements.
- Prevent degradation of existing water quality; encourage water quality improvements as long as the other river values are not adversely affected.
- Provide public access, use and interpretation of the corridor and its resources in a way which is reasonable and consistent with protection and enhancement of the corridor.
- Provide recreation opportunities associated with a free flowing river at a level of use that does not cause deterioration of the resource or adversely affect riparian landowners.
- Provide for the protection, use and enhancement of fish and wildlife resources within the framework of appropriate Federal and State laws.

These goals should serve as a working tool for the administering agency in the management plan preparation. They should also provide landowners a means of determining how their property might be affected.

Specific management concerns include:

- Existing transportation system provides both access for recreation and access to the balance of the Piedra drainage. In the wild segment, the First Fork bridge appears to be inconsistent with the suitability findings of wild. However, since the Departmental guidelines do not prohibit bridges in a wild segment, the First Fork bridge is an exception. The bridge enhances recreation use and, more importantly, will serve as a means to relocate the First Fork campground, removing it from its present river bank location.
- If the river is designated, two small boat access points and one take-out point on the lower segment of the river are needed. These boater access points need only be simple facilities since use is predominantly kayaking. The take-out area will need (as a minimum) sanitation, parking and garbage facilities.
- Motorized vehicle closures should be implemented for the non-wilderness wild segments. Trail bikes should be restricted on trail 596 (Piedra River Trail) which parallels the river between First Fork and FDR 631. The upper portion of trail 599 (Sheep Creek), an old logging road, should be closed to vehicular traffic and the trail relocated.
- Since initiating this study, the San Juan National Forest has received numerous phone calls requesting information on the whitewater character of the river. These calls are primarily from private users looking for new rivers to float, however, several boating companies have expressed interest in potential for commercial operations on the river. The river is acknowledged to be a difficult river for whitewater floating with a swift current and hazardous rapids. Future management plans for the river will have to establish actions to prevent environmental degradation if heavy demands for whitewater boating occur. The plan should also address public safety in terms of boater equipment, user capability, and hazardous water levels.
- The Colorado Historical Society concludes that a complete cultural resources survey be made of the river corridor for the Forest Service to be in compliance with the National Historic Preservation Act and Executive Order 11593. This will involve an on the ground survey of 13,700 acres of National Forest lands. The cost of this survey is estimated to approximate \$25,000. This additional cost is added to the total costs reported on the following page.

D. MANAGEMENT CONCERNS FOR PRIVATE LANDS

Protection of the river values can best be provided through scenic easements, written to prevent scenic degradation in view from the river and control uses on private lands to protect the natural qualities. These are agreements between the administering agency and private landowners in which the agency purchases certain uses on selected portions of the owner's land. Degrading activities can include, among other things, excessive timber cutting, high density building, trash piles or dumping, billboards and gravel or quarry operations.

These agreements generally bind present and future landowners to existing uses and prevent developments that detract from the scenic and natural character of the land. They do not necessarily:

- 1) give the general public access
- 2) restrict or change any present land uses, unless the owner agrees to do so.

Scenic easements in the Piedra River corridor would, as a minimum, be sought for all private lands in the "visual" zone from the river shorelines. Public access rights could be obtained under scenic easements. Access needs through private lands will be determined on a case by case basis during formulation of the management plan.

County zoning and land use regulations under Colorado H.B. 1034 and H.B. 1041 cannot be considered acceptable means of protection to reduce the need for scenic easements. Guarantees do not exist that counties will not award zoning regulations variances nor that zoning regulations will not be made less restrictive or removed completely. Colorado H.B. 1034 has no direct application to preserving or protecting scenic or natural values.

Scenic and access easements covering 1,660 acres within the visual corridor on private lands along the river are estimated to cost \$939,400. The estimate was determined through a 1977 land price study of the 16 separate, private ownerships within the river corridor. Since the 1970 land price study, land values in the river corridor and Archuleta County have been appreciating at a phenomenal rate. In 1979 we estimated the land costs to vary between \$1000 and \$2000 per acre for undeveloped land. The cost of the easements or land in fee title could well exceed \$3,320,000. This potential cost is added to the total in the last paragraph.

Construction of the boater take-out site on the lower river is estimated to cost \$26,000. This includes only minimum facilities as nearby camping is provided by one Forest Service campground in the river corridor. Conversion of the Piedra picnic area to a boater camp and launch site is estimated to cost \$8,250. Relocation of the First Fork campground from the immediate shoreline will cost approximately \$75,000.

The total estimated costs of the proposed designation are \$3,454,300 for development, archaeological survey, and easement acquisition and \$25,000 annually for operation, maintenance and administration.

APPENDIX A

SUPPLEMENTAL GUIDELINES FOR TRIBUTARY AND HEADWATERS IN THE PIEDRA WILD AND SCENIC RIVER STUDY

In directing the Piedra Study, Public Law 93-621 (hereinafter called the Act) states, "Piedra, Colorado: The Middle Fork and East Fork from their sources to their confluence, thence the Piedra to its junction with Colorado Highway 160, including the tributaries and headwaters on National Forest lands".

The language in the Act, designating the Piedra for study, substantially differs from that of most other candidate rivers. 1/ We interpret the Act to require evaluating all flowing bodies of water in the Piedra drainage including rivers, streams, creeks, runs, kills, rills, and small lakes. (Paraphrased from Sections 5(a) of the Act.)

To aid in the determination of eligibility, supplemental guidelines are proposed. The intent of these guidelines is to:

1. To ensure that each unnamed stream segment is identified throughout the study. The study team chose a system using stream orders as set forth in standard drainage basin morphology. 2/
2. To describe, where possible, in an objective and scientific manner, those characters or combination of features that should be considered when evaluating for "outstandingly remarkable" value.
3. Document the basis for study team conclusions.

The phrase "outstandingly remarkable" has strong emotional appeal but is difficult to define in fact or objective terms. In reading these supplemental guidelines, it is important to bear one qualification in mind; it is important to understand each guideline, but more important is their collective intent. Although each distinctive character need not be present, each character must be considered in evaluating the stream segments. In some cases, just one distinctive character may justify the river's addition to the National System.

The Act defines free-flowing: "'Free-flowing', as applied to any river or section of a river, means existing or flowing in a natural condition without impoundment, diversion, straightening, riprapping, or other modification of the waterway. The existence, however, of low dams, diversion works, and other minor structures at the time any river is proposed for inclusion in the National Wild and Scenic Rivers System shall not automatically bar its consideration for such inclusion".

All small tributaries should have natural perennial flows during normal years. The study team interprets the Act to imply that a river must have water because of its definition in Section 15(a) by stating, "'River' means a flowing body of water . . .". The Act further uses the term "free-flowing" in Section 1(b), Section 2(b), and Section 15(b).

The Federal guidelines state that, "The river or river unit must be long enough to provide a meaningful experience. Generally, any unit included in the system should be at least 25 miles long".

Supplemental guidelines for the Piedra are that each small tributary that qualified as a worthy addition should be part of a higher order that qualifies.

The Federal guidelines state that, "There should be sufficient volume of water during normal years to permit, during the recreation season, full enjoyment of water-related outdoor recreation activities generally associated with comparable rivers".

Supplemental guideline for the Piedra study is that there should be sufficient volume of water during normal years to maintain an aquatic ecosystem within the shorelines which provide for full enjoyment of water related outdoor recreation activities generally associated with small streams. Although the Act does not define minimum flow, the study team will accept the minimum flows defined by the State of Colorado in defining minimum flow for recreation and aesthetics.

Outstandingly Remarkable Scenic Values

These values are associated with the content of what the viewer sees and the capability of the area to be seen.

Slopes which are dissected, uneven, sharp exposed ridges or large dominant features that provide opportunity to view as opposed to situations that have no prominent features and no or low visibility.

1/ Encampment and Los Pinos Rivers, Colorado have similar wording.

2/ Ven Te Chow, HANDBOOK OF APPLIED HYDROLOGY, 1964, McGraw-Hill, Inc., pp. 4 (43-45).

Rock or cliff forms with features standing out on land form as opposed to features that are not visible.

Vegetation providing a variety of patterns, contrast in color, texture, and shape as opposed to continuous vegetative cover with little or no change.

Water forms that provide changing character including falls, pools, riffles, rapids, and meanders as opposed to streams that have little diversity.

The ability to see wildlife in its natural habitat.

Outstandingly Remarkable Recreational Values

The stream and its immediate environment should provide a wide variety of related land and water based recreation opportunity. Recreation activities should provide exhilaration and challenge to meet the expectations of the novice and/or the skilled. Camping and picnicking should be accommodated in the immediate environment without being seen from the streambed.

Outstandingly Remarkable Geology

The opportunity to appreciate geologic phenomena for scientific, recreational, and aesthetic purposes relies upon geologic formations being exposed and reasonably accessible.

1. Rocks - a variety of rock types, fossilized rocks, rare rock or mineral types, and uncommon rock associations.
2. Formations - containing a variety of examples of geologic processes including: folded, tilted, horizontal, or vertical strata; evidence of thrust faulting; intrusive or extrusive volcanics; exemplary cases of slumps or slides.
3. Provide areas for rock-hounding and gem or semi-precious stone collecting.
4. Exposed formations should present several eras of the geologic time scale.

Outstandingly Remarkable Fish and Wildlife Values

Lakes along all stream segments should be capable of maintaining fish populations without stocking of creel size fish.

Streams should have self-sustaining population of trout or other desirable species capable of providing a sport fishery without supplemental stocking.

Presence of species that are endangered or threatened.

Provides vital habitat for ranging wildlife, i.e., nursery areas, migration routes, and winter range.

Has known or verified populations of wildlife species separated from their normal range.

Unusual abundance of a single wildlife species.

Unusual diversity or unique associations of wildlife species.

Outstandingly Remarkable Cultural Values

Association of the river or river segments with events that have made a significant contribution to recorded history. These include, but are not limited to, events of early American exploration, Spanish exploration and sites of national importance (National Register).

Artifacts of prehistoric cultures should suggest group activity or a pattern of life as opposed to the chance wandering of an individual.

Artifacts should identify a type, period, or method of construction, artisan, and craft or craftsmanship found nowhere else.

APPENDIX B-I

SOIL TYPES OF THE PIEDRA RIVER CORRIDOR

Soils of the Piedra River corridor were identified in the Piedra Soil Survey Area, San Juan National Forest. Data source is the "Atlas of Maps and Interpretation Data", 1977, Rocky Mountain Region, USFS, USDA.

Adel (1) - Moderately well drained, medium textured, deep soils developing from mixed landslide and alluvial materials derived from a variety of rock. They occur on hill tops, interfluvies, and toe slopes at elevations of 8,200 to 9,000 feet. Classification: fine-loamy, mixed family of the Pachic Cryoborolls.

Carracas (4) - Well to excessively drained, medium textured, shallow soils developing from materials weathered from interbedded shale and sandstone. These soils occur on ridges, hogbacks, and the steeper sloping valley and canyon sideslopes, and are associated with outcrops of sandstone and shale. Classification: loamy, mixed, non-acid, mesic, shallow family of the Typic Ustorthents.

Chris (8 & 9) - Well drained, gravelly and stony medium to gravelly fine textured deep soils developing in materials weathered from sandstone either in situ or locally transported. Classification: clayey-skeletal montmorillonitic family of the Glossic Cryoboralfs.

Dunton (12 & 13) - Well drained, fine textured, moderately deep soils developing in materials weathered from sandstone. They usually occur on mesa tops and sandstone uplands. Classifications: fine, montmorillonitic family of the Typic Paleboralfs.

Endlich (14) - Well drained, coarse textured moderately deep soil developing from materials weathered in place from Precambrian granite. It occurs on steep mountain slopes usually below timberline. Classification: loamy-skeletal, mixed family of the Dystric Cryochrepts.

Gateview (15) - Well to somewhat excessively drained coarse textured deep soils that have developed in glacial moraine material that overlies shale. These occur on outwash fans, terraces, Kames Eskers, and other related glacial topography. Classification: loamy-skeletal mixed family of the Pachic Cryoborolls.

Heflin (19) - Well drained, medium textured, deep soils developing in materials weathered from sandstone and some shale, locally transported and deposited as toe slopes in valleys in areas of mesas and anticlinoria. Classification: fine-loamy, mixed, mesic Udic Haplustalfs.

Histic Cryaquepts (20) - These are very poorly drained, fine textured, deep soils developing in bottom lands along streams. They occur usually as long narrow units.

Hunchback (22) - Poorly drained, fine textured, deep soils developing in colluvium and alluvial deposits. Classification: fine, montmorillonitic family of the Cumulic Cryaquolls.

Igneous Outcrop (23) - This is not specific soil but rather areas of bare exposed andesite and quartz latite. These areas include horns, canyon walls, and Palisades; included with these are areas of torrential cones and detritus.

Igneous Outcrop - Cryorthent complex (24) - This complex occurs on ridgetops and steep valley sides. Igneous outcrops occupy 50-90 percent of the Unit and Cryorthents 10-15 percent. The Cryorthents are shallow, coarse textured somewhat excessively drained soils derived from the igneous outcrop either in situ or locally transported.

Judy (25) - Well drained, fine textured, moderately deep soils developing in materials weathered from limestone. They occur on moderately to steeply sloping mountainsides and ridges. Classification: fine montmorillonitic family of the Argic Cryoborolls.

Leal (26) - Cold, well drained, coarse textured, deep soils developing from materials weathered from andesite. They are usually located on the sides of glacial valleys and steep high mountain slopes. Classification: coarse-loamy mixed family of the Dystric Cryochrepts.

Limber (28) - Well drained, medium to moderately fine textured, moderately deep soils developing from materials weathered from limestone. They occur on mountain sideslopes and ridges. Classification: fine-loamy, mixed family of the Typic Cryoboralfs.

Mayoworth (31) - Well drained, moderately fine textured, moderately deep and deep soils. They are usually located on the drainage sideslopes and upper terrace positions. Classification: fine, montmorillonitic family of the Argic Cryoborolls.

Miracle (32) - Well drained, moderately coarse textured, moderately deep soils developing in materials weathered from sandstone. They occur on dip slopes of cuesta and hogbacks. Classification: fine-loamy, mixed family of the Argic Cryoborolls.

Molas (33) - Poorly drained, fine textured, moderately deep soil developing in glacial till over shale. They occur on gently rolling to hilly areas. Classification: fine, montmorillonitic frigid family of the Typic Argialbolls.

Muggins (34 & 35) - Well drained, medium and cobbly textured over fine textured deep soils developing in glacial till, occurring near glacial troughs where moraines were deposited. Classification: fine, montmorillonitic family of the Typic Cryoboralfs.

Pagosa (37) - Cool, well drained, medium over fine textured deep soils forming in glacial till over shale. They occur on gently sloping to steep hillsides especially on the mass movement depositional lands. Classification: fine, montmorillonitic, family of the Mollic Cryoboralfs.

Pescar (38) - Poorly drained, moderately coarse textured over gravelly textured deep soils developing in alluvium. Classification: coarse, loamy over sand or sandy-skeletal, mixed (calcareous) frigid family of the Aquic Ustifluvents.

Riverwash (39) - Occurs along the rivers and creeks. Consists of deposits of waterworn sand, gravel, and cobblestone of varying thickness. These materials are usually mixed; however, sorted sands and gravels occur. No classification.

Rubble Land (41) - Consists of talus, scree, felsenmeer, and rock glaciers. These occur at the base of steep cliffs of rock outcrop (talus and scree), on tops of broad alpine ridges (felsenmeer), and in alpine valleys (rock glaciers). Size of rock fragment varies from gravel to blocks three to ten feet thick with stones (diameter greater than ten inches being most common). No classification.

Sandstone Outcrop - Ustorthents Complex (43) - This consists of areas containing 50 to 90 percent hard or slightly weathered sandstone and 10 to 50 percent Typic and Lithic Ustorthents. These areas occur as cliffs, dip slopes, or front slopes of hogbacks and cuestras and mesas. The ustorthent portion is coarse textured, shallow, and moderately deep, excessively drained soils. These areas have rapid runoff and high erosion rates.

Typic Cryohemists (45) - Consists of deep, poorly drained and very poorly drained organic soils. They have a peat layer 36 to 60 inches thick over a grey silty or sandy textured substratum. These organic soils occupy the bottoms of cirque basins and areas adjacent to streams. Classification: Typic Cryohemists.

Typic Ustorthents (46) - These areas consist of coarse textured, well drained, deep soils developing from mixed igneous materials. They occur on alluvial fans, cones, and toe slopes. These areas receive water from higher areas and certain spots are subject to flash flooding.

Winifred (49) - Well drained fine textured, moderately deep soils developing in situ from materials weathered from black or dark gray shales. They usually occur on rather sloping shale drainageways. Classification: fine, montmorillonitic family of the Typic Haploborolls.

Woodrock (50) - Cool, well drained, medium textured, moderately deep soils weathered from igneous materials. They usually occur on moderate to steep sideslopes. Classification: fine-loamy mixed, family of the Typic Cryoboralfs.

APPENDIX B-II

ECOLOGICAL LAND UNITS OF THE PIEDRA RIVER CORRIDOR

Establishment of ecological land units provide the framework for measuring the lands capability and suitability for various resource use. The ecoclass inventory procedure is based on a hierarchical classification system involving land form, vegetation, and aquatic information to form the basic integrated mapping unit called an Ecological Land Unit (ELU).

Vegetation and landform were used as the primary considerations for establishing the ELU boundaries. Once established, physical data such as geology, soils, climate, elevation, slope, and soils productivity were identified to determine the response of the ELU to various resource management and development activities. The value of the ELU's is that they make the response to various activities more predictable.

The classification process resulted in 48 ELU's. The ELU's generally occurred in two or more non-contiguous areas throughout the drainage; some had no less than twenty-five occurrences. Of the forty-eight in the Piedra Valley, sixteen occur once or more in the river corridor. The complete listing and descriptions are on file at the Supervisor's Office, San Juan National Forest. Table D-I displays the thirty-one occurrences of the sixteen ELU's of the Piedra River corridor.

The following descriptions are the ELU parameters used in the river corridor:

The Landform System:

High Uneven Mountains

This land form consists of sharp, uneven highly dissected, high mountain and alpine slopes. These areas include glaciated peaks, high cliffs, rock outcrops and alpine regions.

Mass Movement Depositional

These areas occur primarily on slopes of sedimentary materials (primarily shales, siltstones, claystones, mudstones, conglomerate and interbedded formations of these). They are generally located on the lower slopes of the high uneven mountains and in relatively narrow bands along the watercourses. These are usually not restricted to any particular exposure. They are usually associated with faults. A number of fault blocks and scarps can be identified and linked to these hummocky and slump areas. These areas are relatively unstable.

Sedimentary fluvial lands (SFL 2 & 3): Moderately steep, weak to strongly dissected, with a few canyon areas.

These lands consist of moderately sloping sandstone uplands along with which occur few canyon-like areas which are associated and located adjacent to the river. The uplands are mostly rounded, somewhat plateaued, generally convex and moderately dissected. There are a few hogbacks and cuesta dip slopes that also occur.

The canyon-like areas occur within the river corridor. These areas consist of steep valley side-slopes which usually contain large areas of rock outcrops, rocky areas, and areas with little soil development. They lend considerable amount of visual character to the landscape and are generally physically unsuited for most uses.

Sedimentary fluvial lands; steep slopes, strongly dissected. (SFL 4)

This land form is the steeper sloping, strongly dissected sandstone uplands, ridges and side slopes. It is closely associated with the other sedimentary fluvial lands. The formations involved are predominantly the Morrison and Wanakak sandstones.

Glacial Depositional Lands

These areas consist of lands that show much evidence of glacial fluvial action. Included are end, lateral and recessional moraines and some ground moraines.

Low, Uneven Terrain

This land form occurs between the bottom lands and the sedimentary fluvial lands. It consists of pediment erosional remnants, uplifted and downthrust sedimentary blocks, which occur as low hills, small table lands and elevated alluvial plains. Portions of these lands have high relief with small scarp faces and rock outcrops and are strongly dissected. These areas are formed mostly on calcareous shales and limestone.

The Vegetation System:

Riparian Habitat - Communities of streamside or riverside vegetation, the composition of which is influenced by the presence of abundant soil moisture. Both obligative and facultative plant species occur in riparian areas. However, the fact that approximately 40% of all species in these areas are obligates calls attention to the importance of this habitat in maintaining vegetative diversity.

Spruce-Fir - Engelmann spruce and sub-alpine fir existing as a mixture of both species or as nearly pure stands of either species. Understory vegetation is generally very sparse. This type is a climax type. Inclusions include aspen, mixed conifer and mountain bunchgrass, each of which is less than 5 percent of the type.

Mixed Conifer - The dominant overstory vegetation of this type is elevational dependent. Starting at the lower elevations and progressing upwards - ponderosa pine, Douglas fir, white fir, Engelmann spruce, and subalpine fir. Quaking aspen can be found intermixed with any of the preceding or can be found in nearly pure patches closely adjacent to the others. In the lower river, ponderosa pine will be found in combination with Douglas fir, white fir, and aspen. In the higher elevations white fir, Engelmann spruce, and subalpine fir are predominant. In all areas you can find the variation from one species growing in almost pure stands to combinations of three or more of the other species. In several different areas, aspen may occur in stands of 10-100 acres in size. Although these stands appear to be aspen in the overstory, there is usually an understory of a combination of all the associated mixed conifers. These stands will progress to pure conifer stands.

Alpine (Grass, Rock, Other) - This type is characterized by low dwarfed and often matlike vegetation which includes grasses, sedges, forbs and willow. Poa species, Carex species, and Geum occupy the better drained slopes and valleys, whereas the more poorly drained areas are dominated by willow, clovers, gentians and Carex species. Inclusions of rock may occupy up to 10 percent of the type.

Ponderosa Pine - The dominant overstory species is ponderosa pine. Generally there is very little, if any, understory vegetation due to the closed overstory canopy and lack of sunlight to the forest floor.

Ponderosa Pine-Oak - The dominant overstory species is ponderosa pine. In most of this type there is a moderate to heavy understory of Gambel's oakbrush. Generally the crown density of ponderosa pine is less than 80 percent.

Mountain Bunchgrass - The dominant vegetation of this type is a mixture of grasses and forbs. The primary climax species is Thurber's fescue which in many areas has been replaced by Kentucky bluegrass through past grazing practices. Other species present are bromes, wheatgrasses, Stipa's. Predominant forbs are: beardstone, blue bells, dandelion, and lupine.

Carex-Grass - This type is characterized by Thurber fescue, mountain brome, Stipa spp., and numerous species of Carex that prefer well-drained sites. Many areas of this type have been invaded by Kentucky bluegrass as a result of past grazing practices.

Mixed Grass - The vegetation of this ELU is dominated by Thurber fescue in the drier sites which make up approximately 85 percent of the ELU. However, the streams that cross this ELU favor a more moist habitat. In these moister sites, the dominant grasses are Poa spp., Carex spp., with a few overstory species such as narrow-leafed cottonwood, willow, and blue spruce.

Suitability Determination System:

Group I - Suitable for Development

This group includes ELU's that are mostly level to moderately sloped, with average slopes of less than 30 percent. Water yield is moderate to high. The average annual precipitation is adequate and the climate warm enough so as not to be a primary factor in inhibiting vegetative growth. The timber and forage productivity is mostly moderate to very high. The erosion hazard and mass movement potential is mostly low and moderate. Precautionary measures or constraints fall within standard techniques for all developments.

Group II - Partly Suitable for Development

This group includes ELU's that are mostly moderately sloped to rather steep, with average slopes of less than 50 percent. Water yield is moderate to very high. The average annual precipitation is adequate so as not to be a primary factor in inhibiting vegetative growth. Vegetative growth is not normally restricted by cold climate. The timber and forage productivity varies from low to high. Erosion hazard and mass movement potential is mostly moderate but with some areas being low or high. Some precautionary measures are necessary when these ELU's are developed. Portions are not suitable for development at all while other portions are suitable.

Group III - Not Suitable for Development

This group includes ELU's that are mostly rather steep. Some are areas with vertical cliffs. Water yield is moderate to very high. The average annual precipitation is adequate so as not to be a primary factor in inhibiting vegetative growth, except in those ELU's above timber line that are blown free of snow which causes a droughty condition. Vegetative growth is restricted by cold climate in those ELU's above timberline. The timber and forage production varies from moderate to nonexistent. The erosion hazard and mass movement potential is mostly moderate to high on the areas where soil development has occurred. Special precautionary measures are necessary when these ELU's are developed, if they are developed at all. Since several vegetation types are similar and have similar or identical wildlife associations, the wildlife/vegetation systems are grouped rather than individually listed. They are:

Wildlife Relationships:

Spruce, Spruce-Fir and Spruce-Fir-Carex. Elk, mule deer and black bear are the major mammals inhabiting this type, finding escape and resting cover for all three and some food. Mule deer and elk find habitat for bearing and rearing their young in this type. Common birds found in this type include mountain chickadee, pine siskin, ruby-crowned kinglet, western flycatcher, hairy woodpecker and sharp shinned hawk.

Mixed Conifer. This vegetative type is inhabited by a large variety of wildlife species because of the great vegetative diversity. Elk, mule deer and black bear find excellent summer habitat to bear and rear their young. Along with black bear, year-long residents include blue grouse, red squirrel and coyote. Common birds associated with this type include Steller's jay, Williamson's sapsucker, hermit thrush, warbling vireo and violet-green swallow.

Alpine (Grass-Rock Other). Species found in this type include pika, yellow-bellied marmot, white-tailed ptarmigan, bighorn sheep, elk and mule deer. Portions of this type provide year-round habitat for bighorn sheep, pika, marmot and white-tailed ptarmigan. Elk and mule deer find summer habitat here. Numerous birds found in this type include white-crowned sparrow, pine siskin, grey-headed junco, water pipit and the western flycatcher.

Ponderosa Pine. This area is used primarily as cover because of the lack of other vegetation in the understory. Species using this type include mule deer, black bear, porcupine; birds are solitary vireo, western wood pewee, pygmy nuthatch and the western tanager.

Ponderosa Pine-Oak. This vegetative type supplies some winter range for mule deer and elk; however, it is used primarily during spring and fall. Other species are coyote, bobcat, turkey, badger, black bear, pine siskin, orange-crowned warbler, chipping sparrow and broad-tailed hummingbird.

Aspen-Carex, Aspen-Carex-Grass. This vegetative type provides excellent summer habitat for numerous species. Common species include elk, deer, black bear, Audubon's warbler, green-tailed towhee, grey-headed junco, warbling vireo and violet-green swallow. Beaver, muskrat and other water-dependent species are found in those areas with adequate water.

Mountain Bunch Grass-Mixed Grass. This vegetative type is generally adjacent to or closely interspersed with conifers or aspen. The close association with these other vegetative types create large amounts of "edge", used extensively by many wildlife species. Mule deer and elk use these parks for forage during spring, summer and fall. Most of this type is snow covered during winter and is not used as big game winter range. Common species using this type include coyote, badger, black bear, chipmunk, northern picket gopher, blue grouse, pine siskin, grey-headed junco, Audubon's warbler and American robin.

Oakbrush. This vegetative type provides some winter range for big game. It supplies habitat for elk and mule deer during spring and fall. Coyote, bobcat, badger, and an occasional mountain lion hunt in this type. Black bear are especially fond of the acorns, chokecherries, currants and other wild berries. Wild turkeys find a good share of their diet produced in this type. Birds using this type include numerous hawks, the dusky flycatcher, green-tailed towhee, Virginia's warbler, black-headed grosbeak, Steller's jay and the black-capped chickadee.

Dry Grass. Most of this type is interspersed with or is closely adjacent to ponderosa pine and oakbrush. In many cases, it supplies winter forage for deer and elk. This type is often inhabited by small rodents such as mice, gophers and voles. Consequently, it is used by coyote, bobcat, badger and skunk for hunting. This unit may be found on all aspects at lower elevations, but only on south and west aspects at higher elevations. It receives moderately heavy winter use by big game and summer use by livestock.

Wetgrass. This vegetative type is used by many wildlife species because of its water. Waterfowl, beaver, muskrat and numerous small mammals such as shrews and voles are residents. Water ouzel, red-winged blackbird, cliff swallow and violet-green swallow are common birds. The primary value of the type is for forage and cover for watering wildlife. This vegetation system is a component of the riparian habitat.

The Federal Register contains a list of 23 endangered and 17 threatened candidate plant species for Colorado as determined by the Smithsonian Institute. It is not known if any of these species occur in the Piedra River corridor. There is a chance that species under the following genera might occur: Arabis, Lesquarea, Stellaria, Astragalus, Oxytropis, Trifolium, Eriogonum, mertensia and Draba.

20-13	T.37N., R.3W.	24-27"	0-30	Sandstone & Outwash	15, 12	M	M	G	S
21	Sedimentary Fluvial 2 & 3-Ponderosa Pine								
21-6	T.36N., R.4W.	21-29"	0-60	Sandstone	43, 8	H	M	P	U
21-7	T.36N., R.3W.	23-33"	15-45	Sandstone	8, 9, 43	H	M	F	U
21-10	T.35N., R.4W.	20-23"	0-45	Sandstone	12, 13, 14	M	M	G	PS
21-11	T.36N., R.3W.	23-27"	0-45	Sandstone	4, 9	H	M	F	U
22	Sedimentary Fluvial 2 & 3-Ponderosa Pine-Oak								
22-2	T.36N., R.4W.	22-32"	15-60	Sandstone	8, 43, 12	H	M	F	U
22-6	T.37N., R.3W.	27-29"	0-30	Sandstone	37	L	L	F	S
22-11	T.34N., R.4W.	27-29"	0-60	Sandstone	9, 4	H	M	G	PS
25	Sedimentary Fluvial 2 & 3-Carex-Grass								
25-7	T.37N., R.3W.	25-29"	0-15	Sandstone & Alluvium	22, 23	M	L	F	S
30	Sedimentary Fluvial 4-Mixed Conifer								
30-10	T.35N., R.5W.	19-25"	15-60	Sandstone	43, 9	H	L	P	U
31	Sedimentary Fluvial 4-Ponderosa Pine								
31-1	T.35N., R.4W.	21-29"	15-60	Sandstone	43, 8	H	H	F	U
31-2	T.34 & 35, R.4W.	19-29"	15-45	Sandstone	43, 9, 4	H	L	P	U
31-3	T.36N., R.4W.	23-26"	0-45	Sandstone	8, 32	H	L	F	U
38	Glacial-Mixed Conifer								
38-4	T.38N., R.3W.	27-36"	0-30	Glacial Drift & Landslide	41, 37, 50	L	L	F	S
39	Glacial-Mixed Grass								
39-2	T.38N., R.2W.	27-29"	0-15	Glacial Debris	38, 37	L	L	F	PS
41	Glacial-Ponderosa Pine								
41-2	T.37N., R.3W.	25-28"	0-15	Alluvium & Shale	37, 35	L	L	F	S
45	Low Uneven Terrain-Ponderosa Pine-Oak								
45-3	T.37N., R.2 & 3W.	25-29"	0-15	Shales & Limestones	35, 14, 31	N	L	F	PS

Development Suitability = S-Suitable, PS-Partly Suitable, U-Unsuitable, H-High, M-Moderate, L-Low, G-Good, F-Fair, P-Poor

APPENDIX C

WATER DATA - PIEDRA RIVER

Water Quantity:

Historic water data for the Piedra river is supplied by USGS water gage 93495 on the Piedra near the downstream limits of the study area. The following data was extracted from the gage records.

San Juan River Basin
09349500 Piedra River Near Piedra, Colo.

Location - Lat 37°13'20", long 107°20'32", in NW1/4NW1/4 Sec. 17, T.34 N., R. 4W., Archuleta County, on right bank 0.1 mi (0.2 km) downstream from bridge on U.S. Highway 160, 0.4 mi (0.6 km) upstream from Yellow Jacket Creek, and 1.5 mi (2.4 km) northwest of Piedra.

Drainage Area - 371 mi² (961 km²).

Period of Record - October 1911 to September 1912, October 1938 to June 1973 (discontinued).

Average Discharge - 35 years (1912, 1938-72), 309 ft³/s (8.751 m³/s), 223,900 acre-ft/yr (276 hm³/yr).

Extremes - Maximum discharge during period October 1972 to June 1973 (also maximum for water year), 4,080 ft³/s (116 m³/s) May 18 (gage height, 6.05 ft. or 1.844 m); minimum daily, 32 ft³/s (0.91 m³/s) Oct. 1-3. Period of record: Maximum discharge not determined, occurred Oct. 5, 1911. Maximum discharge determined, 7,980 ft³/s Sept. 6, 1970 (gage height, 7.92 ft or 2.414 m in gage well, 9.40 ft or 2.865 m, from floodmarks), from rating curve extended above 2,300 ft³/s (65 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 17 ft³/s (0.48 m³/s) Nov. 11, 1950.

Greatest flood since at least 1885, that of Oct. 5, 1911. Another major flood occurred June 29, 1927.

TABLE C-1
 SAN JUAN RIVER BASIN
 09349500 PIEDRA RIVER NEAR PIEDRA, COLO.
 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972
 (Last full year the gage was in operation)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	480	198	89	85	60	128	230	632	842	114	39	40
2	287	173	122	80	60	103	223	680	776	114	36	38
3	203	163	114	85	55	122	208	728	788	120	37	38
4	165	173	96	75	55	183	212	814	849	108	35	34
5	143	178	68	65	60	218	228	828	782	108	37	40
6	138	173	75	75	62	230	278	716	752	135	37	36
7	130	170	85	80	57	281	305	626	746	108	33	80
8	128	178	80	85	56	302	366	550	891	84	33	65
9	120	168	70	80	57	338	438	535	835	72	33	49
10	116	155	80	75	56	398	490	530	686	68	34	45
11	112	160	80	75	52	450	550	458	615	70	34	46
12	108	168	68	75	51	480	600	418	605	63	33	50
13	103	175	75	76	52	520	560	430	626	55	31	61
14	96	160	75	73	54	535	490	470	520	49	30	54
15	92	175	80	70	55	462	430	605	450	43	31	49
16	94	178	70	70	60	418	410	698	410	40	29	60
17	236	138	60	69	60	430	420	710	396	42	28	50
18	242	150	65	70	61	430	442	740	344	44	37	44
19	180	103	75	72	61	470	422	821	308	42	38	45
20	178	108	65	72	69	450	414	821	287	39	39	56
21	190	133	60	70	79	426	376	947	248	37	37	62
22	185	133	75	70	99	430	394	828	236	37	33	55
23	183	124	97	70	110	458	454	674	236	38	28	50
24	195	105	99	72	116	434	590	650	230	36	28	46
25	290	114	97	63	106	390	728	740	202	48	26	45

TABLE C-I (continued)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
26	314	116	116	70	96	373	680	752	180	87	25	41
27	269	120	150	68	89	348	570	764	160	62	36	40
28	236	106	126	63	94	314	530	764	145	54	40	36
29	225	114	124	68	118	260	585	814	130	45	40	31
30	190	96	106	58	-----	248	674	856	122	42	42	32
31	175	92	92	55	-----	239	-----	821	-----	41	42	-----
TOTAL	5,803	4,405	2,732	2,234	2,060	10,868	13,297	21,420	14,395	2,045	1,061	1,418
MEAN	187	147	88.1	72.1	71.0	331	443	691	480	66.0	34.2	47.3
MAX	480	198	150	85	118	535	728	947	891	135	42	80
MIN	92	96	60	55	51	103	208	418	122	36	25	31
AC-FT	11,510	8,740	5,420	4,430	4,090	21,560	26,370	42,490	28,550	4,060	2,100	2,810
CAL YR 1971	TOTAL 80,573	MEAN 221	MAX 835	MIN 38	AC-FT 159,800							
WTR YR 1972	TOTAL 81,738	MEAN 223	MAX 947	MIN 25	AC-FT 162,100							

PEAK DISCHARGE (BASE 1,300 CFS). - No peak above base.

TABLE C-II

PIEDRA RIVER WATER QUALITY - BASELINE STUDY

Parameter	P-1	P-2	P-3	EF-1	EF-2	MF-1	MF-2
Temperature (°F/°C)	69/20.56	63/17.22	64/17.78	59/15.00	62/16.67	52/11.11	60/15.56
Nitrogen (mg/l-N) Total dissolved	0.9	2.7	0.7	0.7	1.0	0.9	1.7
Orthophosphate (mg/l-PO ₄)	0.05	0.13	0.02	0.25	0.27	.017	0.20
Hardness as CaCO ₃	60	78	134	38	74	16	44
Phenolphthalein Alkalinity as CaCO ₃	4	20	8	0	0	0	0
Total Alkalinity as CaCO ₃ (mg/l)	60	82	96	60	82	28	58
Specific Conductance (micromhos @ 25°C)	130	210	340	100	165	58	125
pH	9.3	9.1	9.1	7.2	9.0	8.5	9.1
Turbidity (NTUs)	1.4	6.1	2.3	0.8	2.7	0.8	4.7
Dissolved Oxygen (mg/l)	7.1	7.9	7.9	7.3	6.9	8.6	7.4
Percent Oxygen Saturation	104.1	106.2	106.3	99.6	94.3	103.6	98.1
Estimated Discharge (cfs)	40	62	80	5	20	8	20

P - Stations on Piedra River

State Bl Stds. - Primary Trout Stream

EF - Stations on East Fork Piedra River

State Standards generally more restrictive than Federal Standards for general recreation use of surface waters.

MF - Station on Middle Fork Piedra River

TABLE C-III

F - First Fork P
M - Mosca Creek

TABLE C-IV

Mean log average/10% samples

TABLE C-V

NUMBERS OF MACRO INVERTEBRATES OF THE PIEDRA RIVER SYSTEM FOUND AT SAMPLE SITES

STATION	1974			(Combined)			1975									
	1	2	3	M, C & S1	S-2	C-3	M-3	F-1	P-1	P-2	MF-1	MF-2	EF-1	EF-2	W1-1	W-1
Plecoptera (stoneflies)																
Chloroperlidae				2	1		1					2		1		
Perlidae	3		3									1			3	
Perlodidae	35		6				2					1			2	
Pteronarcidae	44	35	9				2	5					1	1	2	
Nemouridae				3												
Ephemeroptera (mayflies)																
Baetidae	20	40	14	5	3	10	5	4	11	15	4	2	1	1	6	5
Heptageniidae	6	7	1	9		5	5			1	13		3	1	1	
Ephemeridae	3	1	1													
Trichoptera (Caddisflies)																
Brachycentridae	1	5														
Helicopsychidae									1					1		
Hydropsychidae	114	115	153		3	2	5	1	10	4	1	1		6		
Leptoceridae				3				1								
Rhyacophilidae	1															
Coleoptera (beetles)																
Dryopidae							5									
Elmidae		2		2	2			1	2			1		1	1	
Diptera (flies)																
Rhagionidae (Atherix)	14	68	1			1			4		1			1	1	2
Simuliidae	24	15	2			1				2	1					
Tendipedidae												4				
Tipulidae		1	4	1					5			2	1	1		
Chironomidae	6	4	1													
Hydracarina																
Lebertiidae																
Turbellaria (flatworm)									1							
Tricladidae				1												
Planariidae																
Total Families	12	10	9	8	4	5	8	5	7	4	6	8	4	8	8	1
Total Organisms	271	293	195	24	9	19	28	12	34	22	21	14	6	13	16	8

TABLE C-VI

DECREED WATERS DIRECTLY APPROPRIATED FROM THE PIEDRA STUDY RIVER

NAME	River 1/	Use 2/	Amount cfs	Type 3/ Adj.	Adj. Date	Appr. Date
Farrow & Peterson Ditch	P	I	00.75	0,TT	1/20/02	04/10/1879
Farrow & Peterson Ditch	P	I	01.50	0	1/20/02	12/31/1879
Farrow & Peterson Ditch	P	I	03.25	0	1/20/02	03/31/1885
Farrow & Peterson Ditch	P	I	00.75	0,TT	1/20/02	12/31/1885
Farrow & Peterson Ditch	P	I	00.50	0	1/20/02	12/31/1888
Toner Stevens Ditch	MF	I	10.00	0,TT	8/25/03	08/03/1900
Abraham Davis Ditch	EF	I	02.50	S	4/19/62	04/01/1900
Toner Stevens Ditch	MF	I	00.50	S,TT	4/19/62	08/03/1900
ND Pantier Ditch	MF	I	04.50	S	4/19/62	12/31/1900
Piedra Sta. Pipeline	P	I,D	00.0560	S	4/19/62	10/01/1913
Lower Davis Ditch	EF	I	03.00	S	4/19/62	12/31/1931
Abraham Davis Ditch	EF	I	03.00	S,TT	4/19/62	12/31/1931
Piedra Falls Ditch	EF	I	26.00	S	4/19/62	07/18/1934
Piedra Retaining Pond Res.	P	I,P	01.00	S	4/19/62	08/16/1934
Abraham Davis Ditch	EF	I	05.00	S	4/19/62	06/01/1935
Bess Girl Ditch	MF	I	10.00	S,TT	4/19/62	11/01/1936
Abraham Davis Ditch	EF	I	07.50	S	4/19/62	06/01/1939
Kleckner Ditch	P	I,D,S	03.50	S	12/19/68	10/07/1903
Grimes Ditch	P	I,D,S	02.00	S	12/14/68	11/01/1912
Farrow & Peterson Ditch	P	I	12.00	S	12/19/68	05/10/1937
Don LaFont Ditch #1	EF	I	04.00	S	12/19/68	07/16/1940
Don LaFont Ditch #2	EF	I	01.00	S	12/19/68	07/16/1940
Tres Piedras Ditch	P	I	02.00	S	12/19/68	10/01/1943
Don Thompson Pump #1	P	I	02.00	S	12/19/68	06/01/1944
Don Thompson Pump #2	P	I	02.00	S	12/19/68	05/01/1945
Thompson Ditch	P	I,D,O	04.00	SC	12/19/68	07/21/1950
Thompson Ditch	P	I	03.00	S,CA	12/19/68	07/21/1950
Webb Ditch	EF	I,S	01.00	S	12/19/68	05/15/1955
Don LaFont Ditch #2	EF	I	03.00	S	12/19/68	11/02/1960
Don LaFont Ditch #2	EF	I	02.00	S	12/19/68	11/02/1960
Piedra Falls Ditch	EF	I,O	50.00	SC	12/19/68	07/05/1967
Tres Piedras Ditch	P	I	02.00	SC	12/19/68	07/05/1967
Total Decreed Piedra			31.306			
Total Conditional			9.00			
Total Decreed East Fork			58.00			
Total Conditional			50.00			
Total Decreed Middle Fork			25.00			
Total Decreed in (Study River) area			173.306			

1/ River - P - Piedra, EF - East Fork, MF - Middle Fork

2/ Use - I - Irrigation, D - Domestic, O - Other

3/ Type Adjudication, O - Original, S - Supplemental, C - Conditional

Update from State 7/1/78 Alpha listing and State report
on current status as of 2/78.

APPENDIX D

TRANSPORTATION ROUTE DESCRIPTIONS

The following data is extracted from phase I transportation planning for the San Juan National Forest and the Piedra Unit transportation planning. This report includes only the roads and trails that affect or would be affected by river designation action.

Routes of Direct Involvement: Colorado Highway #160 serves as the primary east-west access route to the unit from other parts of Colorado. This route is intersected by three north-south travel routes serving Colorado, New Mexico, Arizona, and Utah. Review of wild and scenic river activities does not identify any diverse effect on the state system.

Wild and scenic river designation may cause minimal increases in recreation travel. The increases will be seasonal with the heaviest impact during the spring. In developing the state system to accommodate other recreation attractions (Mesa Verde, skiing, Silverton train), the Piedra River use will be accommodated.

FDR 631 (Piedra Road): This route is the primary existing access into the upper Piedra Valley from State Highway #160. Under current direction it will remain a collector, ending in the upper valley. Wild and scenic river designation may result in increased recreation use; however, this use will not significantly conflict with other uses. To serve the additional recreation use at Williams Creek Reservoir, the portion of FDR 631 will need some realignment and paving. This improvement will handle any increased traffic resulting from river designation. Current traffic volumes for recreation and commerce are beginning to demand improvement.

FDR 622 (First Fork): This road remains a collector serving the lower Piedra Valley from State Highway #160 near Chimney Rock. The road serves the primary use of recreation (both river and non-river) and timber harvest from areas along connecting local roads. Some of the narrow stretches may need widening if designation of the river would generate large numbers of white water boaters.

FDR 636 (Toner): This road would remain a local road at its current standard. The road serves private land and access to the Middle Fork and the Weminuche Wilderness.

FDR 637 (East Toner): This local road serves the East Fork from the Toner road. Originally constructed for timber harvest it is now used primarily for recreation. In the foreseeable future it will be maintained at its present standard.

FDR 633 (McManus): This route will be maintained as a collector, connecting with FDR 634. Primary use of the road is recreation and local landowner traffic. Phase I transportation planning had new construction at the east end to cross the East Fork of the Piedra River and connecting with FDR 637. Under wild and scenic river classification, this feature is no longer viable.

Table I displays the existing transportation system routes for the Piedra drainage.

TABLE I

LISTING OF TRANSPORTATION ROUTES OF THE PIEDRA VALLEY

Existing System Roads

#	Name	Length (miles)	#	Name	Length (miles)
621	Lower Piedra*	1.2	635	Piedra (Alternate)	1.6
622	First Fork*	12.1	636	Toner	5.2
625	Gordon Creek	3.8	637	East Toner*	7.7
626	Devil Mtn.	12.0	638	Palisade Lakes	3.3
627	Game Farm	2.0	639	Trail Ridge	3.1
628	Snow Ranch	2.9	640	Williams Creek	4.8
629	Turkey Springs	10.5	642	Sand Bench	2.4
630	Monument Park	13.9	644	Poison Park	3.0
631	Piedra (upper)*	46.4	681	Chris Mountain	5.0
633	McManus*	7.3	730	Horse Mountain	4.0
634	Plumtaw	14.2	997	Chub Draw	1.7

Total existing inventoried as of 4/26/77.

Existing System Trails

524	Piedra-Pine	5.5	596	Piedra**	12.0
536	Baldy Mtn.	7.5	597	Coldwater	9.0
538	First Fork**	8.0	598	Coldwater Stock**	7.0
569	Fourmile	8.5	599	Sheep Creek**	5.0
583	Piedra Stock**	17.0	600	Devil Mtn.**	10.0
584	Shaw Creek	7.0	601	Dudley Mtn.**	5.0
586	Cimarrona	1.2	603	Devil Creek	8.0
587	Williams Creek	.3	604	Beaver Lakes	7.0
588	Indian Creek	8.5	605	Second Creek	3.0
589	Middle Fork**	1.0	651	Palisade Meadows	1.8
591	Little Sand Creek	11.0	652	Indian Creek Cutoff**	1.4
592	Weminuche	6.8	654	Middle Mountain	7.0
593	Sand Creek**	13.0	664	Williams Creek Lake	3.5
594	North Ridge	6.0	673	Falls Creek	4.0
595	Lower Weminuche**	6.9	714	Medicine Mine	3.9

The trail system as of 4/26/77.

*Direct service to or along the river.

**Originates on or parallels the river.

INDEX

References given by part one or part two or appendix (1)(2)(A), followed by the page number(s).

A

Action, proposed (1)2
 Administrative costs (see Costs)
 Affected environment (see Environment)
 Agriculture,
 Department of (1)4
 rancher(s) (ing) (1)8,11,13
 livestock. (1)2
 (1)8,11,18,34, (2)19
 uses and crops (1)8,13,20
 Air quality (1)21, (2)4
 Alternatives,
 criteria for evaluation (1)15
 descriptions (1)21-2, (2)31-2
 effects (1)25-32, (2)31-2
 evaluation (1)34-5
 formulation (1)4,18-21, (2)31
 mapped (1)23
 preferred (1)4,37
 Animals (see Wildlife and Fish)
 Archaeologic sites (1)21
 (also see Historic and Cultural)
 Area (acreage),
 converted to subdivision (1)13
 grazing allotments (1)11
 private lands (1)2,3-12, (2)19,36
 river corridor (1)9
 river drainage (1)6, (2)2, (C)1
 study corridor (area) (1)2, (2)2,19
 timber (1)11-2, (2)19
 visual corridor (zone). (2)19,37
 wilderness (1)6, (2)19,36

B

Big game animals (1)10,20, (2)18
 Boater access (2)36,37
 Boundaries,
 recommended (2)34
 segment termni (2)34
 study (1)21
 Weminuche Wilderness (1)38
 mapped (2)12
 Box Canyons (2)7,14

C

Camping/campgrounds (1)9,18,20
 Character,
 outstandingly remarkable (2)22, (A)1-2
 Classifiable units (1)4
 Classification,
 issues (1)2
 objectives (1)21,22
 potential (2)29
 recommendations (1)38,39, (2)34,36
 restrictive level (1)4,21,22,37
 suitability (1)4,21, (2)26-29
 Climate (1)6, (2)2
 (also see Environment, physical)
 Colorado, State of,
 Archaeologist (1)41
 Department of Health (1)41, (2)22
 Department of Highways (1)41
 Department of Local Affairs (1)4,41
 Division of Planning (1)4,41
 Division of Employment (2)6
 Division of Water Resources (1)41

C (continued)

Colorado, State of,
 Division of Wildlife (1)6,10,18,20,41
 Historical Society (1)41
 laws (2)37
 long range goals (1)15,34,35,37
 Southwestern Water District (1)41
 Water Conservation Boards (1)4,6
 water quality standards. (2)22, (C)4
 wildlife management strategy plan (1)18,27
 Congressional Policy and Intent (1)15,34,37
 (2)30
 Continental Divide. (1)2,8, (2)11
 mapped (1)3
 Corridor,
 private lands within (1)2,34, (2)19
 river (1)8,9,10,11,34
 mapped (2)12,13,15-17
 size (1)2
 mapped. (1)7
 study. (1)2
 visual (zone). (2)19,34,36
 mapped. (2)35
 Costs,
 administrative, operation. (2)37
 alternative. (1)26,28,32
 developmental. (2)37
 easements. (2)37
 Counties,
 Archuleta. (1)2,15,41, (2)5
 Hinsdale (1)2,41, (2)5
 Mineral. (1)2,41, (2)5
 eligibility. (1)4,15
 funds. (1)8, (2)6
 planner. (1)4
 planning (1)15, (2)6
 population (2)6
 unemployment (1)8, (2)6
 Criteria. (1)15-16
 alternative evaluation (1)15,21,34
 application. (1)21
 eligibility. (1)4,15, (2)21
 water quality (National Technical
 Advisory Committee) (2)22
 Cultural Resources
 (see Historic and Cultural)

D

Data,
 recreation information
 management (RIM). (1)9,26, (2)18
 resources allocation model (RAM) (1)26
 study (data collection). (1)4
 water discharge. (C)1-3
 Development, suitability for,
 ecological land units. (1)6, (BII)2,4
 water use. (1)25,26
 Ditches (2)11,34
 Diversion structures. (2)14,29

E

Easements (see Private Lands)
 Easement costs (see Costs)
 Ecological Land Units (1)6, (2)4
 listed and described (BII)

INDEX

E (continued)

Economics,
change. (1)13,32,(2)6
county base (1)8,(2)5,6
growth. (1)9
values. (1)27
tabular presentation (1)28,30,32
Eligibility (see River(s) Eligibility)
Employment,
change
gains. (1)30,32
losses (1)30,32
opportunity (1)8
Endangeres species,
Peregrine falcon. (1)6,21,(2)4
species list. (B)5
Energy,
demand. (1)18
hydroelectric (1)20
sources (1)12,20
Environment,
affected. (1)6-13
biological. (1)6
physical. (1)6
social and economic (1)8,9,(2)5,6
Environmental/Land Use Impacts,
Alternative I (1)25,(2)31
Alternative II (1)25,(2)31
Alternative III (1)26,(2)31
Environmental quality,
components. (1)20

F

Federal Agencies,
USDA - Farmers Home Administration. . . . (1)41
USDA - Forest Service (1)8
USDA - Soil Conservation Service. (1)41
USDC - Bureau of Census (2)6
USDI - Bureau of Reclamation. (1)41
USDI - Geological Survey. (1)6,18,(C)1
USDI - Heritage Conservation and
Recreation Service (1)41
Federal/State,
joint conclusions (1)37,(2)34
water quality. (2)22
joint effort. (1)4
joint recommendations (1)38,37,(2)34
study team. (1)2,(2)2,21
Fish (Fisheries) see Wildlife and Fish
Four Corners Area. (1)6,(2)2
mapped. (1)3
Free-flowing (1)2,15,(2)21
(also, see Guidelines, general)

G

Game species (1)10
Geology. (1)6,(2)2
outstandingly remarkable. (2)23
Geologic, time scale (1)6
Goal satisfaction. (1)15,34,35
Guidelines,
general character (1)15
length (2)21,22,(A)1
volume (2)21,(A)1
water quality. (2)21,22
supplemental. (1)15,(2)21,(A)1,2
USDI - USDA (1)4,15,(2)21,29

H

Headwaters. (1)2
(also see Tributaries and Headwaters)
East Fork (2)11
Middle Fork (2)11
Hiking and walking. (1)9,18,20,(2)18
Historic and cultural (2)23
development. (1)8,(2)4,5
Hunting and fishing (1)6,10,20,34,(2)18
Hydroelectric (see Energy)

I

Improvements,
affecting classification (2)29
In-migration. (1)8,(2)5
Irretrievable (1)21,31
Irreversible. (1)21,31
Issues. (1)2

J K

L

Lands,
agriculture. (1)13
National Forest. (1)6
non-wilderness (1)11
ownership transfer (1)25,26,(2)31,32
private. (1)2,6,12,13,20,34,(2)19
public (1)2
sub-divided. (1)13,(2)18
timbered (1)11
wilderness (1)2
Land form (1)6,(2)4,(B)3
Law(s),
Colorado laws (see Colorado, State of,)
Public Law 90-542, Oct, 1968 . . . (1)15,38,(2)2
Public Law 93-621, Jan, 1975 . . . (1)2,40,(2)2
Public Law 94-486, Jan, 1976 . . . (1)2,21,(2)2
Lumber(ing) (1)8,18

M

Maintenance costs (see Costs)
Management Plan (proposed). (2)34
Minerals. (1)12,18
alternative effects. (1)25,26

N

National Wild and Scenic Rivers System. . . (1)2,20
designation. (1)9,21
study. (1)2
No Action Plan (see Alternatives Described)
Non-game animals. (1)10

O

Operations costs (see Costs)
Outputs,
resource
decreases (1)26
estimates (1)26,27
increases (1)26

P

Picnic/picnic grounds (1)9,18

INDEX

P (continued)

Piedra River,
 classifiable lengths (1)21,22
 eligibility (1)37
 length (1)2
 location (1)2, (2)2
 mapped (1)3,7, (2)3
 resources and uses (2)18,19
 segments described (2)11-18
 Principles and Standards,
 accounts (1)18,26
 environmental quality (1)27,29
 national economic development (1)27,28
 regional development (1)27,30
 social well being (1)31
 objectives (1)18
 environmental quality (1)20
 national economic development (1)19
 summary of accounts (1)32
 usage and definitions (1)4,18
 Private lands (see Lands)
 Private land owners (ownership) (1)2,4
 alternative effects (1)25,26
 controls (1)34, (2)34,36
 easements (2)36
 costs (2)37
 Public lands (see Lands)
 Public participation,
 activities (1)4,40, (2)21
 attitudes (1)8, (2)6
 comments (1)4
 concerns (1)21,42
 organizations and individuals (1)42,43
 use, alternative formulation (1)21
Q
R
 Range,
 allotments (1)11
 sheep (1)11
 cattle (1)11
 alternative effects (1)25,26
 Recreation,
 activities (1)9, (2)18
 alternative effects (1)25,26
 controls (1)19
 outstandingly remarkable (2)23
 use (1)9
 Regional,
 employment generated (1)30
 income generated (1)30
 issues (see Issues, described)
 planning commission (1)15
 setting (1)6
 Resources (1)9-12
 (see individual resources by name)
 Resource outputs (see Outputs)
 Rivers,
 alternative plans (1)21,22, (2)31,32
 (also, see Alternative Descriptions)
 eligibility (1)15, (2)25
 recreational (1)15,22,38, (2)26,29
 scenic (1)15,38, (2)29
 values - "outstandingly remarkable" (1)20
 wild (1)15,38, (2)29
 Roads (highways),
 bridge(s) (2)21,29
 described (2)6, (D)1

R (continued)

Roads (highways), (continued)
 listing (1)12, (2)29, (D)2
 uses (1)18,25,26,37, (2)31,32
S
 San Juan National Forest (1)2,6, (2)2
 Sawmill(s) (1)11, (2)5
 Scenery,
 outstandingly remarkable (2)23
 visual character (1)12
 Segments, river,
 headwaters (2)11
 mainstem (2)12,14
 middle valley (2)14
 not eligible (2)25
 sub-alpine (2)11
 wilderness (2)11,14
 Soils,
 regional (1)6, (2)4
 relationships (1)6, (BII)
 type descriptions (BI)2
 Supply/demand (1)18,19
T
 Timber,
 alternative effects (1)25,26,34
 area (1)11
 volume (1)11, (2)19
 Tourism (1)8, (2)5,6
 (also see Recreation)
 Trails,
 along river (2)11-18
 listing (1)12, (2)29, (D)2
 uses (1)18, (2)6
 Transportation (1)12, (2)6,7
 alternative effects (1)25,26,31,32,41
 listed routes (D)1,2
 Tree species (1)11,12, (2)18,19
 Tributaries,
 tributaries (and headwaters) (1)2,4
U
V
 Vegetation, species (2)4,11
 Vegetative associations (2)4,18, (B)4,5
 Vegetative types (2)4
 Vehicle closures (1)34, (2)36
W
 Water,
 decrees (C)6
 absolute (2)4
 conditional (2)4
 quality (1)21
 volumes (1)6,12, (2)19,21,22, (C)2
 Water Resource Council
 (see Principles and Standards)
 Weminuche Wilderness,
 area (1)6
 management (1)9,21,22
 mapped (1)3, (2)3
 resource and values (1)9

INDEX

W (continued)

Wildlife and fish,
 vegetative associations. (B)5
 habitat. (1)2,10,34,37,(2)18
 populations. (1)2,10
 species. (1)6,9,10,(2)4,11,18,23
Wood fiber (see Lumber)

X Y Z

